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THE

Journal of the Society of Arts,

AND OF

THE INSTITUTIONS IN UNION.

110TH SESSION.]

FRIDAY, APRIL 8, 1864.

[No. 594. VOL. XII.

Announcements by the Council.

ORDINARY MEETINGS.

Wednesday Evenings, at 8 o'clock.

APRIL 13.—“On a New Process of Preserving Meat.” By Dr. MORGAN, Professor in the Royal College of Surgeons, Ireland.

APRIL 20.—“On the Patent Laws.” By THOMAS WEBSTER, Esq., F.R.S.

CANTOR LECTURES.

The next lecture on “Chemistry applied to the Arts” will be delivered by Dr. F. CRACE CALVERT, F.R.S., F.C.S., corresponding member of the Royal Academy of Turin, of the Société Industrielle de Mulhouse, of the Société Impériale de Pharmacie de Paris, &c., on Thursday evening, at 8 o'clock, as follows:—

APRIL 14.—LECTURE III.—LEATHER.—The art of the currier. Morocco, Russia, and patent leathers. The art of tawing skins. Chamois and glove skins. Parchment. Hair, its composition and dyeing. Wool, its washing, scouring, bleaching, and dyeing. Silk, its adulterations and conditioning.

APRIL 21.—LECTURE IV.—ANIMAL FATTY MATTERS, the various processes for liberating them from the tissues in which they are contained. Their composition and conversion into soap. Composite candles. The refining of lard. Cod liver, sperm, and other oils. Spermaceti and wax.

APRIL 28.—LECTURE V.—FLESH, its chief constituents, boiling, roasting, and preservation. Animal black, its manufacture and applications. The employment of animal refuse in the manufacture of prussiate of potash. Prussian blue. Manufacture of artificial animal manures.

MAY 5.—LECTURE VI.—ANIMAL LIQUIDS.—Bile, its purification and detergent properties. Blood, its application in the refining of sugar and the manufacture of albumen. Albumen, its use in calico printing and photography. Urine, its uses. Milk, its composition properties, falsification, and preservation. A few words on putrefaction.

INSTITUTIONS.

The following Institution has been received into Union since the last announcement:—

Clay Cross Institute and Public Hall.

The Lady-day subscriptions are now due, and should be forwarded by cheque or post-office order, made payable to the Financial Officer, Samuel Thomas Davenport. All cheques and post-office orders should be crossed through Messrs. Coutts and Co.

Proceedings of the Society.

CANTOR LECTURES.

The first two lectures of Dr. Crace Calvert's Course “On Chemistry Applied to the Arts,” were delivered on Thursday evenings the 31st March and 7th April. A full report of this course of lectures will appear in the *Journal* at a future time.

SIXTEENTH ORDINARY MEETING.

Wednesday, April 6th, 1864; William Hawes, Esq., Chairman of the Council, in the chair.

The following candidates were proposed for election as members of the Society:—

Bourne, Stephen, Examiner's-office, H.M. Customs, E.C. Croskey, Joseph Rodney, Warwick-house, Maida-hill, W. Lawson, Archibald Scott, 1, John-street, Bedford-row, W.C.

AND AS HONORARY CORRESPONDING MEMBERS.

Lancia di Brolo, Le Duc, Palermo.
Venturini, Le Commandeur Charles, Ancona.

The following candidates were balloted for and duly elected members of the Society:—

Nelson, Thomas James, Guildhall, E.C.
Parsey, Samuel, 77½, Little Britain, E.C.
Stanford, Edward C. C., 63, Lincoln's-inn-fields, W.C.

AND AS HONORARY CORRESPONDING MEMBER.

Romako, Joseph, Admiralty, Trieste.

The Paper read was—

ON THE PRINCIPLE OF IMITATION AS APPLIED TO THE DECORATIVE ARTS.

By THOMAS PURDIE, Esq.

The reaction which, within the last thirty years, has set in and run with so strong a current in favour of mediæval architecture has been accompanied by a taste for a similar style in furniture and decoration, in painting and in the forms of worship. The question of rituals is altogether foreign to our province. Nor is it my purpose, in the remarks which I have to bring before the Society of Arts, to discuss the relative merits of Classic and Gothic architecture, of post or pre-Raphaellitism in painting. It seems to me that no man can be a faithful apostle, or even a true loving disciple of art, until he has become truly catholic in his taste and tolerant in his practice; until he has seen the vision of the sheet descending from above, and is prepared to find beauty as well as pleasure in every style of art which has exercised the taste, the skill, and the ingenuity of man. But as the waves raised by this eruption of mediævalism into our times have flowed, in ever-widening

circles, over the feelings of the age, they have left their impress on objects which, *a priori*, no one could have expected they would reach. In the discussions which of late years have been carried on, on the subject of art, language has been perverted from its original meaning, ethics and æsthetics have been jumbled together, bad taste has become confounded with moral turpitude, stucco, when employed to decorate the exterior of a building, is denounced as an unprincipled sham; an ornamental casting as a falsehood, because it may resemble a carving; a composition or painted imitation of a wood or a marble, as a downright and inexcusable lie.

It is my object, by a candid examination of the subject, to try to educe some principle,—to ascertain in what cases ornamental castings and composition or painted imitations of material may be employed, without infringing the laws of propriety or good taste; or whether the use of such appliances belongs to the same category and is to be subjected to the condemnation generally awarded to such practices as the wearing of false jewellery, or the restoring by means of rouge the tints of the rose to the cheek of the faded beauty.

As the text of the present discussion, and as representing that view of the question from which, after a full and I trust a fair consideration, I venture to differ, I shall quote one or two passages from a celebrated author, who is generally considered one of the soundest art-critics of the day. Between the principles of mediævalism and the practice of those imitative arts which shall come under our notice there is no absolute or necessary antagonism. I trust therefore, it may not be supposed that in supporting the one I must be held as condemning the other. In urging the toleration of certain decorative appliances, I yield to no one in admiration of the glorious structures of the middle ages, in which our forefathers have left,—in a fossil form, for the study of the geologists of history,—a record of the taste, the spirit of self-sacrifice, and the religious sentiments of the age in which they lived. Indeed, it will be found that I shall arrive, in numerous instances, at the same practical conclusions with my opponents, although we may have taken different roads to get there.

Touching the false representation of material, says the talented author referred to, in one of the eloquent denunciations for which he is famous, "The question is infinitely more simple and the law more sweeping; all such imitations are utterly base and inadmissible. It is melancholy to think of the time and expense lost in marbling the shop-fronts of London alone, and of the waste of our resources in absolute vanities, in things about which no mortal cares, by which no eye is ever arrested, unless painfully, and which do not add one whit to comfort, or cleanliness, or even to that great object of commercial art—conspicuousness. But in architecture of a higher rank, how much more is it to be condemned. I may perhaps be permitted," he continues, "while I express my sincere admiration of the very noble entrance and general architecture of the British Museum, to express also my regret that the noble granite foundation of the staircase should be mocked at its landing by an imitation, the more blameable because tolerably successful. The only effect of it is to cast a suspicion upon the true stones below, and upon every bit of granite afterwards encountered."

And again, at another part of the same book:—

"The worth of a diamond is simply the understanding of the time it must take to look for it before it is found. Exactly as a woman of feeling would not wear false jewels, so would a builder of honour disdain false ornaments. The using of them is just as downright and inexcusable a lie. You use that which pretends to a worth which it has not; which pretends to have cost, and to be, what it did not, and is not—it is an imposition, a vulgarity, an impertinence, and a sin. Down with it to the ground, grind it to powder, leave its ragged place upon the wall rather; you have not paid for it, you have

no business with it, you do not want it. Nobody wants ornaments in this world, but everybody wants integrity. All the fair devices that ever were fancied are not worth a lie. Leave your walls as bare as a planed board, or build them of baked mud and chopped straw, if need be, but do not rough cast them with falsehood."

I cannot agree with those who think there is no force in these arguments. They seem at first sight not a little convincing; and, coming to us with the sanction of a great name, they would have been worthy of our best attention, although they had been possessed of no other claims. But I believe that they are fallacious notwithstanding.

It will be observed that the sin is held to lie in the deception. I shall not be suspected of an intention to argue that there is no harm in a moral deception, but it may perhaps be asked on what authority the principles of ethics are in this case applied to æsthetics. The principles of ethics are founded (leaving revelation out of view) on the primary convictions of mankind, and I may assume that no one will commit the absurdity of claiming for æsthetics a higher authority. The very fact, then, that these imitations are so generally used and so much admired among an educated and a moral people, certainly affords the strongest possible presumption in their favour. As these primary convictions mainly lead men in the paths of morality, it is surely a sound conclusion that they cannot lead us far or permanently wrong, where any essential principle is involved, in matters of taste. But we shall pass from this point, and ascertain, as careful judges ought to do, on what side the best precedents can be quoted.

Now it is not unusual in disputed questions of taste—which means of course in all questions of taste—to appeal to the authority of the ancient Greeks, as the court of last resort, and I should be sorry to depart from a custom which, if not yet venerable from its antiquity, had at least the merit of being the fashion, until the taste for mediævalism to some extent supplanted that for classic art. In appealing to them we may congratulate ourselves, and perhaps the ancient Greeks too, that they do not live in modern times, for one of two things must have been the result of such a misfortune;—either we should have wanted that authoritative tribunal—the wisdom of our ancestors—before which we could bring our cases for ultimate decision, or they, the ancient Greeks, must have had an accumulation of suits which would have left the Court of Chancery altogether destitute of a reputation.

Did the Greeks then allow the principle of deception in art?

It is recorded of Zeuxis, one of the greatest painters of ancient times, that the birds came and pecked at the fruit on his canvass, while one of his rivals asserted that the boy who held the basket could not be equally well painted, else the birds would have been frightened away; of Apelles, that he painted horses so truthfully that animals of their own species greeted them by neighing. Whether these stories be more worthy of belief than that of Arion and his Dolphins, we know not, but the fact of their being related, sufficiently proves that the wonderful people whose support we claim were not less alive to the power of painting than of music, and that the deceptive character of the former was reckoned one of its chief merits. In a trial of skill between Zeuxis and Parrhasius, the victory was adjudged to the latter, when his opponent, entering his studio, desired him to withdraw the curtain behind which he supposed his rival picture was concealed, the curtain itself being the picture; and Zeuxis gracefully acknowledged his defeat, saying his own picture had merely deceived birds, while the other had deceived men.

But we can appeal to an authority which many will regard with greater veneration than that of the ancient Greeks. Ornamental castings in bronze, iron, and other materials were universally employed during the middle ages, while the first use made of oil painting after its

discovery in the early ages of the Christian era was to paint imitations of marble.

The work of Heraclius, a compendium of the arts as practised previous to his time, is supposed to have been written in the seventh century. In it we find elaborate instructions for preparing the surface of columns, and painting them in imitation of marbles, as if, too, this were the only artistic use to which the oil vehicle could be applied. In fact, precedents of all ages may be adduced to sanction the practice which our modern authors condemn. But it is not enough that we produce strong presumptive evidence, however conclusive that may be, in support of our views. Nor is it enough that we can appeal in their support to the practice at once of ancient and modern times. We must also show that they are just in themselves or that they rest on right principles. This we propose to do by the following method:—

1st. We shall shortly advert to that love of imitation in which the fine arts have their origin.

2nd. We shall state some cases in which deceptive imitations are admissible, as contrasted with those of a different class.

3rd. We shall name the qualities which give value to decorative appliances, and illustrate the subject by showing how far some of these fulfil the conditions required of them.

4th. We shall conclude by pointing out and illustrating the conditions which ought to regulate the use of surface coatings.

First, then, as to that love of imitation which lies at the root of the fine arts. All decorative art may be divided into three kinds with reference to its subjects, or the mode in which they are treated.

1st. The geometrical.

2nd. The conventional.

3rd. The purely imitative.

Examples of the first-class are to be found connected with every style of architecture. Almost all moresque ornamentation is geometrical, and the Greek fret may be named as affording an example of the style.

The second-class, or conventional, takes its place midway between the other two. It is imitative after a fashion, through which—although natural forms are not directly imitated—the spirit of the form imitated is retained, as a melody in music, in the variations which are composed upon it. The most perfect examples of conventional ornament are, perhaps, the lotus of the Egyptians, and the honeysuckle of the Greeks. All architectural ornament may be said to be either geometrical or conventional, or a combination of the two.

The third, or purely imitative art, includes the painting of the human figure, of landscape, fruit, flowers, and all cases in which a direct representation of the object is attempted.

We cannot afford time to treat this subject fully, nor have we anything to do in the present discussion with geometrical or conventional ornamentation. Our attention will be restricted to the third class which we have named, as it is only in the exercise of purely imitative art that the questions now proposed for discussion can arise.

To make a great artist, the head, the heart, and the hands must combine. He must be possessed of the three great qualities which give power over the imagination, the emotions, and the understanding. He must be possessed, first, of imagination or fancy, the power which creates, invents, or suggests, which is common to the painter, the poet, and the sculptor. Second. He must possess a sympathetic nature—that power of sympathy which teaches the heart to vibrate in unison with the true, the beautiful and the good. In simpler language, he must be possessed of taste, which has been well styled the science of the emotions, a faculty which—according as it is considered passive or active in its nature—signifies on the one hand susceptibility to the emotion, on the other, the knowledge intuitive or acquired, of those qualities in external things which are fitted to excite in

others. Third. He must possess technical knowledge and skill to enable him to express by means of form and colour the ideas which the mind has conceived. Now these three qualities of imagination or fancy, taste, and executive skill, must be found, less or more, in every work of art. Not equally.

It is only in the highest rank of art, where human life is the subject and human form the mode of expression, that the highest faculties of the artist are called into exercise. This rank is the highest, for the simple and obvious reason that it does so employ these powers that it deals with the noblest subjects, and addresses itself to the most profound emotions of the human mind. It is in the field which these faculties open to us that art must operate if it is to assist in the great work of cultivating the intellectual powers or the moral sentiments, and in reaping the rich fruit they are calculated to bear.

But at the root of all art lies the love of imitation. To this feeling the fine arts owe their existence. Without some notice of it, therefore, it seems no theory of the fine arts could be perfect. This love of imitation, or of representing objects by their images, whether exemplified in the tendency to imitate or in appreciating works of imitative art, is, no doubt, an original powerful sentiment or instinct of our minds. We love imitation for its own sake—not only as a means but as an end. Apart from and beyond the pleasure which we receive from such an object, for example, as a portrait, in recalling the features of the “distant or the dead, the loved or the lost,” there is a pleasure in observing the resemblance between the original object and its image; a pleasure which may be traced to the same source, whether it be found in poetical imagery, in a dramatic representation, in a picture, a statue, or a simple imitation of marble.

But this love of imitation is not always associated with the highest qualities of the mind. It may be indulged in numerous instances where no original idea is expressed, or where that idea is to be found in the subject of the imitation. All such examples employ the mechanical more than the intellectual powers, and cannot therefore rank so high as works of art. They do not suggest great thoughts, but they may possess great beauty, and they may yield a rational pleasure in suggesting interesting relations between the imitation and the thing imitated.

Now, this imitation in the fine arts must be distinguished from reproduction, as well as from imitation effected either by organic or mechanical means. One receives no impression of beauty from the resemblance which the apples on a tree bear to each other. Nor would he be struck by seeing a table with a vase on it reproduced by another table and another vase. But let a painter produce these objects on his canvass, they would receive a new virtue, which, to use a popular phrase, would attract and please the eye. Where the deception is complete the pleasure is gone, because there is no image—nothing to judge of—nothing to compare.*

Having thus indicated what imitation in the fine arts means, we come, as proposed under our second head, to state some cases in which deceptive imitations are admissible as contrasted with others which belong to a different class.

But I must first explain that when, in the course of this discussion, I employ the terms deceptive or deception, they must be understood in a qualified, not an absolute, sense. Where an object is an actual deception, it can obviously afford no pleasure as a work of art, although it may give pleasure from its intrinsic beauty. Suggestion, not deception, is the object even of that art which is purely imitative. Some objects, however, admit of, or demand, more perfect imitation than others.

We purpose now to test, by a few illustrations, how far we are justified in making these imitations actually

* See “*Essai sur l’Imitation dans les Beaux Arts*.” By Quatremère de Quincy.

deceptive in their character, or so deceptive as to produce an illusion.

Such deceptions in that highest art which adopts human life for its subject, can scarcely be said to be possible, and so far as possible would, if practised, meet with universal reprobation. The technical and merely imitative elements would be found to obtrude themselves offensively in works where they ought to be kept in a subordinate position. But there are other and more palpable reasons for our dislike. You cannot certainly imitate a living, breathing, sentient being so as to deceive permanently, but you may succeed in producing a momentary illusion. You may model a figure in wax to imitate, with tolerable exactness, the human form and features. You may colour the skin. You may cover the lay figure with clothes. The finely-moulded contour may charm for an instant, under the belief that you look at real flesh and blood. You approach—you touch—the spell is broken—"you start, for soul is wanting there." It is a corpse—a coloured piece of corruption. This is no subject for a vulgar deceptive imitation truly. The nearer the approach made to the reality in such instances, the more offensive. Our dislike to such objects is founded on the same principle of our nature which makes us consider the ape as the ugliest of animals, because it most resembles man. The wax figure is too like life, for it only awakens a painful sense of its absence.

The general condemnation awarded to coloured statuary, although partly due to habit and fashion, may be attributed to the feeling called forth by the test which we supply. A deceptive imitation should not be attempted where, from the nature of the thing, or the impurity of the material, it cannot be rendered perfect. I may mention, as examples of this principle, the coloured friezes in the Greek court of the Crystal Palace; the coloured carved Madonnas one meets in all Roman Catholic countries, with which few of our countrymen will be found to sympathise. I can hardly exclude from the catalogue the tinted statuary shown at Kensington in the late exhibition. Of course no attempt was made with these statues to imitate nature, but what was done, if not a step in that direction, seemed to reduce the marble to the level of wax. No doubt there are other reasons for the feeling which we assume to exist, of which two may be stated. 1st. The colouring of statuary is an application to one art of the resources which properly belong to another; and 2nd, Sculpture has held the highest place in art because it appeals to intellect alone and not to the senses. The colouring of statuary, by introducing a sensual element, at once degrades it from its high position. We not merely tolerate, but admire statuettes in china coloured to the life with tolerable exactness. These, however, cannot produce an illusion, so there is no chance of their creating the feeling of disgust engendered by wax figures.

But this disgust and annoyance at the disappearance of an illusion are not always felt, even where the human figure is concerned.

Did any one ever feel disappointed at discovering the figures on the ceiling of the Parisian Bourse to be paintings merely? Did any one ever experience other feelings than those of admiration at the inventive talent displayed in those designs, the marvellous imitative power and command of the materials of art which could produce such works. The means in this case are equal to the end. These pictures are, however, imitations, not of men, but of sculpture, and as such successful. Great as designs, and executed with such exquisite skill as to fulfil all the conditions required of the material which they are intended to represent.

Such works as these, the numerous painted *bassi relievi* and other similar works in the Louvre and elsewhere, the paintings of De Witt and his followers receive from the world generally, notwithstanding the denunciations under which they labour in common with all deceptive imitations, the need of approbation which they so fully deserve.

How stands the case as to landscape? Framed pictures we may pass over as affording no illustration of our subject. It would be a rare talent which would enable one to paint a landscape so as actually to produce an illusion when placed within a few yards of the spectator. But no illusions are more perfect than those of the scene painter. Are panoramic painted views, such as those of London, as seen from the top of St. Paul's, or of Paris, as seen from the Pantheon, to be forbidden delights in order to satisfy the requirements of this new theory, because possibly the spectator may have difficulty in persuading himself that he is looking on a flat surface? I have seen, as every one may have seen who has visited sunny Italy, what might have been a dismal court-yard changed into a paradise by the skill of the painter. In the foreground, instead of a blank dreary wall, wood and water and green fields. In the distance a picturesque range of mountains, with the sunlight striking through the gorges and tipping the far-off summits with its golden radiance. But who, on walking towards those mountains and finding they were merely painted on the boundary wall, not fifty yards distant, the wall itself being built so as to form their rugged silhouette, experienced other emotion than that of pleased surprise at the skill which could produce so marvellous an effect by means of painting. And are we to be told that all such art is base and inadmissible. "What! because thou art virtuous shall there be no more cakes and ale, and shall not ginger be hot in the mouth." Must the pent-up denizens of our cities be compelled to gaze on a blank dreary gable or into a dismal court, when he has a desire to look on brighter and more lively things, or to dwell among the horrors of Erebus, when the painter's brush, like the wand of a magician, may transform the scene into the Elysian fields?

Now I know it will be asserted that such art as I describe is not high art. Let me admit the truth of the assertion. I have already said that art is great only as it employs the intellectual faculties. The laws of perspective are now well known, and the application of them is so far mechanical. But all men are not Wilkies, nor Paul de la Roche, nor Turners, nor Roberts, luckily, or else we should have everybody producing works of high art, with nobody to buy them. It is to be feared that in such circumstances the only employment for an artist would be akin to that of Vishnu—the contemplation of his own perfections, an occupation, profitable it may be, for gods in whom humility is no virtue, who neither eat nor wear clothes, nor beget children, but not for men who do all three, and who, to be estimable, must be humble withal.

But no reasonable man would deny to an artist the right of exercising, for his own profit, and for the pleasure of his fellow-men, such talents as God has given him, merely because they are not so transcendent as those of the great masters we have named.

The fact is, as I have already indicated, this crusade against deceptive imitations, though neither essentially pre-Raphaellite nor mediæval in its character, is a phase of the fashion which has exhibited itself, and is running its course in architecture, painting, and religion. Strange practical paradoxes into which theorists are sometimes dragged, into what adhesive and traitorous quagmires of delusion and absurdity are men frequently carried when they take to ride stiff-necked hobbies. I have seen pictures of the pre-Raphaellite school in which the imitation was carried so far as to be startlingly deceptive. An imitation of what? Literally of withered leaves and straws, painted with a greater amount of care and finish than had been bestowed, in the same picture, on the human face divine, so startlingly deceptive that it seemed as if the straw had been packed in between the glass which covered the picture and the panel on which it was painted. Yet men who denounce all imitations as sinful, who cannot find terms sufficiently strong in which to condemn the man who spends his time and gains his livelihood by imitating the delicate veining or the rich and varied colouring of a marble, exhaust the

English language for words to sound the praises of a school which admits of such puerilities.

But deception is allowed in many cases besides painting. What is that which forms the charm of novel-writing but its deceptive character? It would be a new style of objection to Robinson Crusoe, that no one could read the book without feeling persuaded that it narrated facts, or to Sir Walter Scott's delineations of Baillie Nicol Jarvie and Dominie Sampson, that through their verisimilitude, they, the creatures of an imaginative brain, had taken their place as historical personages. What is the source of the delight we take in dramatic representations? Among all the objections which have been urged against the stage, did any one ever hear it asserted that actors in their professional capacity are deceitful above all men, and desperately wicked? Could it be said that Macready was an unprincipled scoundrel, because no one could see him perform without believing him to be animated by the passions which his words expressed? Over and above the interest of a drama which, although badly performed, may to some extent sway the feelings, the deceptive character of its representation forms its chief interest, and in its appeal to the imagination constitutes the performance a work of art. We admire the acting of a man who personifies a passion, while we might disregard or despise one actually under its influence.

What would Carlyle say if arraigned before the bar of public opinion for the form which some of his great works have taken? If he were charged with imposing on the public the belief that his Sartor Resartus was founded on a volume he had received of Professor Teufelsdröckh, from the press of Stillsweigen und Geschellschaft, of the town of Weissnichtwo; if it were stated in aggravation of his crime that he was an old offender; that the effect of the deception which in this case he had practised—to use the identical words employed in denouncing that class of imitations which we are now engaged in defending—was to cast a suspicion on the existence of his Abbot Sampson and the genuine Chronica Jocelini de Brokelonda, and on every bit of genuine history afterwards encountered. Do not let it be supposed that these cases are irrelevant. They are truly in point, and they are fair illustrations. The sin which is denounced is the so-called deception, common to them all, and the consideration of it as exemplified in such cases may prepare us for its admission in those others which are to come more immediately under our consideration. It must be observed that these dramatic representations and these works of fiction, like painted marbles, deceive only those who have not knowledge or penetration enough to detect the imposition. In this case, if the deception be the crime, the balance of argument, according to the views of our opponents, is in our favour. The painting contains internal evidence to reveal its true nature, while the real character of the acting, or of such writing as that in which Carlyle indulges, must be ascertained from certain conventionalities known only to the initiated, or from extraneous sources.

Immediately we shall come to some cases where the deception is not so admissible. But before doing so let us take an example from the highest and noblest of all the fine arts—that art which appeals not merely to our business and our bosoms, but to that region of man's nature which forms the seat of his most exquisite delights—the stomach. It has been well remarked of gastronomy and astronomy that the former is the more noble science, that a philosophic cook who discovers a new dish is a greater benefactor of his species than a man who discovers a new star, because we have more stars than we can ever make use of, while it is impossible ever to have too great a variety of dishes. We require, therefore, no apology for drawing an illustration from so noble a science.

Let us suppose that Goldsmith's country parson, "passing rich on forty pounds a year," from the produce of his garden to manufacture an effervescent beverage and dignify it with the name of champagne. I apprehend he would not be guilty of a sin either against morality

or good taste, in partaking of it himself, or in sharing it with his friends, if it pleased their palates. But woe to the nobleman or wealthy merchant who should attempt to palm such an article on his guests. They would receive it as a villainous compound, suspect their host of poisonous designs, and take care to have "unfortunately contracted a previous engagement" on all future occasions when they received his invitations. Mock turtle, though utterly destitute of the dignity which appertains to the original dainty whose noble name it bears, and in fact, without aristocratic pretensions of any kind, and it may be even somewhat plebeian and vulgar in its origin and connections, is not yet wholly proscribed, and may be met with occasionally in respectable society. But let any one conceive, if he can, the position which a Lord Mayor would occupy, who, to save the contents of his purse or the digestive organs of his guests, should supply the sham instead of the real article at his inauguration banquet.

There is here, however, not a question of sin or no sin, but of consistency or inconsistency, of propriety or impropriety. In furnishing an imitation, instead of the genuine article, there is, in the case I have supposed, no intention of deceiving any body. The original delicacies are used for certain good or pleasing qualities they possess; the same good qualities you simply reproduce in the imitation, for good qualities are real things and cannot be imitated. It is even so with imitations of materials, for the same or similar motives exist for using them.

What, then, is the conclusion of the whole matter? The sin or offence, where it exists, is ever to be found in the motive. Thus the host who passes off his gooseberry and mock turtle as genuine; the novelist and essayist who writes with the actual design of falsifying history; the citizen who paints his garden wall to make believe that he is proprietor of a vast demesne; the householder who decorates his halls in painted marbles to impose on his friends and acquire a cheap dignity, is guilty of telling or acting a lie. But everyone knows that such cases do not exist. In dramatic representation, in works of fiction, in all examples of imitative art, although the intention is not to deceive, the deceptive nature of the representation forms a legitimate appeal to the imagination. In imitations of favourite dishes, prepared to please the palate, and in imitations of materials to please the eye, the one class is used on account of their beauty, the other on account of certain good qualities which render them desirable. In this view neither can be considered deceptive, nor even imitative, for the beauty of the one class of object and the good qualities of the other are undeniable realities.

We have thus considered a few cases in which the deceptive character of the objects seems to be unobjectionable. But when we come to discuss the question of false jewellery we find that it stands on altogether a different footing.

Precious stones are worn not for their beauty alone. If they were so, then the false would serve the purpose equally well, and no stigma would attach to their use, for they are quite as beautiful as the real, and, indeed, it is difficult to tell the difference between the two, for even connoisseurs are apt to be deceived in such matters.

Gems are worn on account of the dignity they confer as objects of cost. Hence the counterfeit meet with condemnation from all persons of education and refinement. A woman who wears false jewels intends that they should pass for that which they are not. She is a pretender to a rank and position to which she has no claim. She is guilty of a vulgarity—an impertinence—a sin if you will—from which everyone with sense and propriety would instinctively shrink.

There is a palpable fallacy contained in an argument which places in the same category imitations of objects which are used solely or chiefly on account of their beauty, and those which are used solely or chiefly on account of their suggesting ideas of cost. A fancy wood

or marble is an example of the former—a precious stone, of the latter. You may deceive by making an article which possesses little real value resemble a costly one, but to speak of deceiving as to beauty is a simple absurdity. The appearance of cost and value may exist without the reality—the appearance of beauty and the reality are one and the same thing.

Such a thesis as that which we have been disputing could not be maintained consistently throughout, so we find it stultified by the admissions of its author. “Gilding,” he says, “has become, from its frequent use, innocent. It is understood,” he says, “for a film merely, and therefore is allowable to any extent.” I cannot admit the abstract justice of the doctrine contained in this passage, for it would go far towards justifying any practice, however absurd, which might happen to have the sanction of antiquity, and it is certainly altogether at variance with the principle on which imitations are condemned by the same author. According to this doctrine, gilding must at one time have been wrong. But that which is originally wrong can never be made right by repetition. On the contrary, it is common to hold that what is here advanced as a palliation can only serve as an aggravation of the offence.

It is hoped that we have already found sufficient justification for using imitations of materials, such as fine woods and marbles, in all legitimate situations; but this passage, if we could avail ourselves of it, and if justification were needed, would afford all that could be desired, for the use of these imitations has been for a long period so common, that however deceptive they may be, they will seldom, if ever, pass for aught else than what they are.

These remarks on gilding betray a total misconception as to what decoration really is. Decoration is a thing of surface not of construction, although the construction will frequently indicate what the decoration ought to be. You have no more reason to suppose that a thing is solid gold because it is gilded on the surface, than to suppose that a lady is silk because her outer garment is composed of that material, or that you would find the downy surface or the delicate tints of the peach at whatever point you might intersect it. The apology, therefore, tendered for gilding is not only superfluous, but of a character which could not have been accepted had an apology been necessary.

This brings us to point out, as we proposed to do under the third division of our subject, the qualities which give their value to decorative appliances. These, which we name in the order of their importance, are—

- 1st. Beauty.
- 2nd. Durability, and
- 3rd. Costliness.

We have just been speaking of gilding. For its employment we require no other apology than the possession of the above-named qualities, and in this respect it stands on precisely the same footing with almost all other decorative appliances, cement or plaster, metallic coatings of bronze, silver, or gold, paint, silk, veneers in wood, marble, or free-stone. Our principle is of universal application. A lady makes the dress which is to be seen of silk, her under garments of a cheaper and less showy material. You veneer a plain, inexpensive wood with one of a richer hue and of a more expensive quality. You coat your brick or rubble walls with cement, with paint, with ashlar stone, or with marble. They are understood to be mere coatings, thicker or thinner as the case may be. Zinc is coated with bronze, bronze with silver, and silver with gold, and in doing this we simply follow a natural instinct, and the example which nature herself has given us.

We shall now try how far stucco and scagliola, or painted imitations of marbles, possess these three qualities of beauty, durability, and expression of cost.

First, as to stucco. It seems to be felt necessary that some expedient should be adopted for adorning the un-

sightly brick buildings of which such a town as London is chiefly composed. This is effected by the material under discussion, either by an entire coating, or by means of projecting facings, thus adding force to the outlines and principal features, and contributing to the composition, those elements of light and shade so essential to the beauty of architecture, and in which brick buildings are generally so deficient. It certainly is not the fault of bricks that they are not ornamental, seeing they can produce such buildings as the Ospedale Maggiore of Milan, the Certosa of Pavia, or even such examples of street architecture, as those recently erected in Cheapside, which are now daily arising around us. But the ornamental bricks, or terra cotta, used in the construction of these buildings, being simply moulded as is the stucco or cement, are liable to precisely the same condemnation. Brick architecture of such a character would leave nothing to be desired, but it is to be feared the expense will interfere with its general adoption. The expedient usually resorted to for getting rid of the dull uniformity and flatness of brick erections, that of bands, lozenges, and squares of various colours, seems to me as barbarous as the tattooing of the savage and of precisely the same nature. The lines and forms seem to destroy the contour of the building by substituting stronger markings than those which are presented by the solids and vacuities, they withdraw attention from the principle architectural features—from the form and outline of the building which give it character and expression, and in which, as in a face, the beauty ought chiefly to be found.

Stucco, then, supplies a want—in cases where stone is not to be had or where it is too expensive for general use. In regard to its possession of the three qualities we have named; in beauty it is nearly equal to stone, because it admits of the same identical forms, and if properly treated the difference between the two surfaces is scarcely appreciable; in durability it is, of course, inferior to stone. But such beauty and such durability as it does possess are absolute qualities, and in regard to these stucco does not occupy the position of an imitative material, for it is obvious that beauty and durability do not admit of imitation. As to expression of cost, stucco expresses more cost than plain unadorned brick, and less than stone. It is, therefore, a less noble material than the latter, so that its use will be restricted by the conditions to be afterwards stated.

We may here remark, in passing, that so long as stucco remains unchallenged as a decorative appliance for interiors, it will be difficult to show why it should not be employed—subject, of course, to conditions—on exteriors also.

Scagliola and painted imitations of marble stand on precisely the same footing. Their beauty arises from various sources. One of these is inherent, due to the colour shades and veining, which, constituting the loveliness of the real object, are found, only in a less degree beautiful, in the representation. The second source of beauty is the taste, skill, and ingenuity displayed in the execution of the imitation, which the practised eye at once detects, while a third class of beauty may be discovered in the deceptive character objected to, and which forms, we hold, a legitimate appeal to the imagination. No doubt such imitations are wanting in beauty of the highest class; they do not engage the greatest faculties of the artist, they do not suggest great thoughts, but such beauty as they do possess is derived from sources which are quite legitimate.

In durability they are, of course, much inferior to real marbles, although greatly superior to most other styles of painting in use for internal decoration. From the smoothness of the varnished surface they are easily cleansed, and at the end of thirty years will be found to have suffered less from tear and wear than plain paint would have done in a third of that time.

As expressive of cost they are of no mean value, though

from their inferiority in this respect to the originals, they will be excluded from use in many cases by one of the conditions I shall specify.

I now proceed to lay down and illustrate the last division of my subject—the conditions which ought to regulate the employment of surface coatings. These are—

1. That they be not employed to imitate a material where the original itself would be out of place.

2. That no object be painted or otherwise made to imitate one material which, from its form, construction, or application, is obviously or necessarily composed of another.

3. That no inferior surface coating be employed where we should expect one more expensive, and no imitation where we are entitled to find the real material, or where the discovery of an imitation would create disappointment.

Everyone may supply himself with illustrations. For example; as to the first condition. Imitation marble should never be used on such positions as ceilings, where the construction is obviously a wooden one; nor on shop-fronts in crowded thoroughfares, where the real material would be destroyed as soon as exposed, and where it would therefore be out of place.

In illustration of the second condition, we may mention that elaborate delicate carvings should not be painted to represent granite, nor iron columns like wood or marble where these materials are unfit for the duty in the way of support or otherwise, which the iron has to perform.

In regard to the third condition. We have said that decorative appliances are valued for three qualities—their beauty, durability, and expression of cost. We may assume that the rank or wealth of the person who owns a work of art, or who makes use of a decorative appliance, will not alter our estimation of its value or fitness, so far as these are imparted by the two first-named qualities, beauty and durability. Our ideas on these points may be said to be absolute, except in so far as they are liable to be changed with regard to beauty by the influence of fashion.

But the third quality we have named is to be considered in a different light. The fitness or unfitness of a work of art or of a decorative appliance, considered with reference to expression of cost, falls to be determined by the rank, wealth, and social position of the person who owns or makes use of it.

The question involved, then, in the discussion of the third condition, under which we assert that imitative appliances may be used, is perhaps, in this view, not strictly æsthetical. We shall give one or two illustrations of our principle.

If we should find in the cottage of an agricultural labourer a figure, say of the "Dying Gladiator," we should receive it as an evidence of great taste, although the statuette should prove to be of zinc electro-plated with bronze. Such an object would be out of place in the possession of a rich collector; but, if I mistake not, few connoisseurs even would be sufficiently purist in their tastes to object to the same figure in bronze plated with oxydised silver. If I might venture to express an individual opinion, I should say there is no more beautiful appliance in use at the present day for coating bronzes. Probably even a zinc bronze-electroplated figure, if large and applied to a useful purpose, such as holding a light, might be found unobjectionable in a similar situation. In a nobleman's mansion, or even in a royal palace, our feelings would not be shocked if we were told that the gold dinner service we were admiring was not solid gold, but silver gilt, while we should feel it to be the essence of meanness if the noble or royal possessor had resorted to the cheap expedient of having dishes only plated on nickel instead of genuine silver. One admires the beauty of the colossal statues which adorn the throne room in the Residenz of Munich without regarding the material of which they are

composed. No doubt our respect for them would be much enhanced, whatever we might think of the wisdom of the monarch who had them cast, if we were made aware that they were solid masses of gold. But as no one probably ever indulged in this belief, so nobody was ever disappointed when told that the substance is bronze, and the gold which meets the eye a superficial coating merely. Perhaps the mind may be the better prepared for the gilding of bronze by the knowledge of the fact that its colour is but a lacquer, the bronze itself but a hollow sham, a pretender to solidity, representing bones, flesh, and skin; when it is skin *et præterea nihil*. If the idea of a figure being mere skin and bone exposes it to contempt, what is to be said of one which is skin only without even the bones.

I have thought it necessary to direct attention pointedly to this custom of coating a common cheap metal with metal more attractive, as well as more expensive in the view of ascertaining whether it is a practice which can be indulged in with propriety, and on what principle; because it is not merely an important branch of the general question we are considering, but because it involves important material interests and has been treated at considerable length by various modern writers on art who are recognised as authorities, and who have arrived at what seem to me to be false conclusions on the subject.

The third condition which I would impose on the use of deceptive coatings, and which I will now repeat, seems entirely to meet the case.

That no inferior coating be applied to a surface where we should expect one more expensive, and no imitation where we are entitled to find the real material, or where the discovery of an imitation would create disappointment.

This mode of viewing the subject brings us back to the question which we have already so far discussed—of worthiness or unworthiness, of propriety or impropriety.

We have a right to expect that every one will support with dignity the rank and position which God has assigned him in the world. No man can do this who resorts to shabby and cheap expedients in his ordinary business even, much more in matters of taste and ornamentation. But shabbiness and cheapness are relative terms. We do not expect our bourgeoisie to veneer their walls with real marbles, although we have all seen such finishings. In king's houses in all parts of Europe they exist. The interiors as well as the exteriors of the old Venetian palaces were so decorated. In the residences of many even of the smaller German potentates, and in the mansions of the wealthier of our own citizens, a few examples are to be found. One has therefore a right to expect our own royal residences and public monuments to be decorated with the noblest materials. One could scarcely be reconciled to the idea of having the noblest apartments in the palaces of the Queen of England decorated with painted imitations of rich materials. Our opponents may condemn such incongruities wherever they are found, and in any reasonable terms they choose, for there is no doubt in such positions they would be worthy of all condemnation. If costly materials and costly works of art are to be found anywhere, surely it ought to be in the palaces of that monarch on whose dominions the sun never sets. Genuine gooseberry and mock turtle at a lord mayor's feast would seem absolutely virtuous by the comparison.

Even these rules, however, will not admit of too rigid application. In many instances the work, from want of previous arrangement, is put into the hands of the decorator in a state which leaves him little choice in the matter. Besides, the use of such decorative appliances as a painted imitation of marble frequently affords the means of introducing a mass of rich broken colour in situations where a flat uniform tint would be ruinous to a composition. Of these means even Raphael did not scruple to avail himself in the decorations of the Loggia. The use of such appliances may therefore be occasionally justifiable, where too rigid an application of our rule would exclude their use.

In fact, we cannot, in all matters of taste, establish such

unchangeable canons as those which settle the principles of morality. In matters of taste there are many things essential, and there are many things of little moment. Within the region of aesthetics there is a vast debateable land where individual preferences have free scope for exercise. Within this region it is impossible to ignore or set aside the influence of fashion, whose code, for the time being, is as inexorable as the laws of the Medes, though, unlike those laws, it is ever inconsistent and ever changing.

In matters of personal adornment deceptive expedients have always been less or more in vogue. The Greek ladies, jealous, it may be presumed, of the beauty which they discovered in the low foreheads of certain of the inferior animals, and anxious to rival it in their own persons, invented a species of wig to conceal the upper part of the forehead, and bring the hair as nearly as possible down to the eyes. The faces of the Roman ladies, having been properly softened and prepared by means of a bread poultice plastered over their features at bed time, were daily, after it was washed off with asses milk, brought by means of paint to rival the hues of the lily and the rose. In these days of ours we complacently accept the improvement in our personal appearance effected by the operations of the dentist, and do not grumble at their deceptive tendency. Perhaps their manifest usefulness may in some degree leaven the vanity which frequently induces the patient to submit himself to the operator. In the style of dressing her hair, although woman has found out many inventions since the time of the Greeks, still must her flowing locks be rendered fuller and more flowing by foreign aid. Fiction has still to be added to fact that she may realize her ideal, though that is not the ideal of 2,000 years ago.

We are not so tolerant of paint. It is not easy to define that principle which admits of one lady making herself more charming by adding pounds of hair to the supply which nature has bestowed upon her, and which denies to another, animated by precisely the same amiable motive, the privilege of making up for nature's deficiencies by the use of rouge. Perhaps if the paint were applied after the manner of the Cherokee Indians, so as not to deceive any body, it might satisfy the aesthetic scruples of some of our friends of a certain school.

Sir Joshua Reynolds says in one of his Royal Academy discourses, "If a European, when he has cut off his beard, and put false hair on his head, or bound up his own natural hair in regular hard knots, as unlike nature as he can possibly make it, and after having rendered them immovable by the help of the fat of hogs, has covered the whole with flour put on by a machine with the utmost regularity; if, when thus attired, he issues forth and meets a Cherokee Indian, who has bestowed as much time at his toilet, and laid on with equal care and attention his yellow and red ochre on particular parts of his forehead and cheeks, as he judges most becoming; whoever of these two despises the other for this attention to the fashion of his country, whoever first feels himself provoked to laugh, is the barbarian."

Now, no doubt there is a right and a wrong in most of these matters, which may be discovered when the search is worth the trouble, but it does not follow that what is right now must be right in all time. We speak not here of fashions which change without apparent reason.

Ten years hence it is possible that gold and silver, now so highly prized as decorative appliances, may, in consequence of a depreciation in the value of the precious metals, have become vulgar and commonplace; but the great principles which ought to guide the artist or decorator will ever remain the same.

In the region of man's inner nature lies a mine, inexhaustible to him who can trace the deep workings of the human soul and embody them in visible form. There must the artist seek the principles which are to guide him in the exercise of his profession. "Custom, the Queen of the World," has a vast dominion, and her subjects are slaves. But these are the unthinking and vulgar. The

man of original independent genius will disdain to wear her fetters, or to sacrifice essential principles at her command. Somewhat he may concede, in matters non-essential, out of deference to the powers that be. But as "deep answereth unto deep," he will ever intuitively recognise permanent and intrinsic excellence, and in all matters where essential principles are infringed, will abjure the transient fashions of the day.

DISCUSSION.

Mr. J. G. CRACE would preface the few observations he addressed to the meeting by stating the great pleasure he had derived from the paper that Mr. Purdie had read to them. He thought it not only reflected great credit upon that gentleman, but upon the profession to which Mr. Purdie and himself belonged. It was very gratifying that a gentleman so employed could bring to bear on such a subject so much research, intelligence, and knowledge as he had displayed. He had made the subject both interesting and instructive to them, and though he (Mr. Crace) might not quite agree with all that had been brought forward, he thought their differences would not be material. First of all, he thought he might allude to a little confusion in Mr. Purdie's argument with reference to imitation. The true object of art he took to be imitation; the right application of imitation was another matter. The more perfectly a painter represented the subject of his picture, the more real and perfect would be his excellence in his art; but in using imitations the question of appropriateness and suitability must be borne in mind. He would begin with the use of stucco on the exterior of buildings. He thought, as influencing the progress of art, its use had been pernicious. It certainly afforded great advantages in the preservation of the exterior of buildings, but it also furnished such facilities for false representations and bad construction, and for hiding so many faults, that whatever its advantages might be, he considered they were neutralised by these objections. If there had been no stucco, long before this our artists might have introduced the beautiful forms and decorative features to which brickwork could be so well applied. He maintained that, in our street architecture, we were only now beginning to realize the beautiful forms, colouring and architectural features of which brickwork was susceptible. Mr. Purdie had instanced some glorious examples in the buildings which abounded in Milan and other parts of Lombardy, where the most beautiful forms, with good effects of light and shade, were produced by the employment, not of moulded bricks alone, but by the proper application of ordinary bricks, placed at certain angles and depths. If buildings such as were now designed had been erected in our country 20 or 30 years ago it was absolutely certain that architects would not have attempted to conceal the brickwork by a covering of stucco, so as to make it look like bad stone, in addition to which a row of buildings monotonously alike were often painted a variety of shades, utterly destroying all harmony of effect. He thought that in architecture the mode of construction should be apparent, and as much as possible of the real material employed should be displayed, and made to form the ornament of the building. He now came to the interior. Stucco in the interior of buildings assumed a different position altogether. It became then a legitimate covering to the construction, imparting a surface to a rough material. In ceilings, cornices, and walls such an application was useful and legitimate, unless they were content to have the brickwork shown inside, which he did not think would be satisfactory. They covered it with a material which could be made to assume any required form and colour. He thought, however, the great sin of ordinary house decorators was to use their paint when it was not wanted. In building a house, instead of leaving the wood work to show itself, which he thought a legitimate plan, they put on several coats of paint, destroying the sharpness of the

mouldings. If the wood were plain deal, and if a little more money were spent in the preparation of it, and then it were simply varnished and allowed to pass for deal, it would look infinitely better than half the elaborate colouring and graining put upon it. The wood itself might be legitimately decorated by light or dark lines of colour or by gilding. On one occasion he was called in to decorate a building in Scotland, where he found the wood work of pitch pine, beautifully executed, but they had begun to paint it. He stopped this, and merely had the wood varnished, and though this was done many years ago it looked as well as ever. Then again, with regard to graining, he thought this was too freely used. A whole tint worked up with varnish would look better and last as long as imitations of maple or other fancy woods, and the idea of a sham would be got rid of. The same remarks applied to imitation of marble. A corridor might often be made far more tasteful and equally durable, with plain colour properly applied. Marbling was perfectly unsuitable for the style of houses in which it was frequently applied, though, if a hall presented a fair architectural appearance, he had no objection to imitation marbling, where the real marble would not have been out of place. Then again, with regard to gilding. He thought "white and gold" was a perfect god-send to ordinary house decorators. They took no trouble to exercise taste or judgment by decorating with harmonious arrangements of colour, which presented considerable difficulties to incompetent persons, but felt themselves safe in recommending white and gold. It was sure to look simple and beautiful, but it prevented the march of taste in the decorative arts. Sometimes a delicate tint of green was suggested, but there appeared to be no desire to get beyond the hacknied style which prevailed too much in the present day. He thought men should endeavour to improve upon what had been done before. Mr. Purdie in his paper had condemned the improper application of imitation, in which view all persons of sound taste must agree. Mr. Purdie had also remarked that they would, of course, expect in a nobleman's house that silver or gilt plate would be genuine; but that in more humble houses imitations were allowable. He could not agree to that. He thought that in a humble home it was bad taste to ape the splendour of royalty or nobility, however cheaply gilt objects might be produced. Silver was better than gilt brass. It was more satisfactory to use a material which was what it pretended to be, rather than an imitation of something else.

Mr. J. BEAVINGTON ATKINSON said they ought to feel greatly indebted to the author of the paper for drawing the very important distinction which existed between ethics and aesthetics. No doubt much confusion had of late years been thrown into the sphere of the fine arts by mingling together elements which belonged rather to the sphere of ethics than to that of aesthetics. The danger of this was the greater because mere rhetoric was exceedingly taking with the general public. A critic, for example, who should write that a picture had thrust a dagger at the moral sense of the public would probably find an echo in many drawing rooms in this country, and yet he believed persons acquainted with the subject would know that such a criticism was in all probability little better than nonsense. While he spoke thus strongly he yet was one of those who firmly believed that there were certain fundamental principles which governed the constitution, and, if he might say, the morality of the fine arts; and the first and most essential principle was this, that the idea sought to be expressed, the essential and central thought to be embodied, should be of the noblest kind, and that being established and fairly rooted in the mind of the artist, he thought secondly would come the consideration by what instruments and by what means the artist might best incorporate and express that idea. Those two principles he believed constituted the truth, the probity, and the purity of the fine arts. Now, as to the means which an artist had to employ, he

really knew of nothing more practical or anything better than the doctrines of old laid down respecting drawing, composition, light, shade, and colour. He believed in these would be found the true decalogue of the arts. As for the material, this, as he had already indicated, must be subordinate to the intent. A statue might be executed in clay, terra cotta, plaster, marble, or gold, and he ventured to say of all those materials the gold would be the least admirable. The heroes of the world were not accustomed to be clothed in gold. They spoke for what they were, for what they had done; and the expression, the intent of the work constituted in fact its true nobility. Now, as to the subject of imitation, important and he thought true distinctions had been laid down by Mr. Purdie. He would add to what that gentleman had said that perhaps the primary question, after all, was what should be imitated? A brass kettle in a Dutch picture could not have much dignity, but if they took Holman Hunt's picture of the "Finding of Christ in the Temple," and if they observed the fidelity with which the artist had there imitated the transparency and the expression of the eye of the Saviour, he thought there they would find that imitation had attained to something like divinity. Imitation, therefore, was not an evil, but it was a means to an end. That was obvious: and he thought it was undeniable that the more perfect the imitation the better. With regard to the perfection of that imitation and the mode of its application, much depended upon what the artist should emphasise and what he should leave out. If he directed his attention to what was really great, that imitation would then attain a great and dignified end; but if he descended to what was small and paltry, then his work was so far marred, and the imitation, which as he had said, was in itself a worthy instrument, then became degraded. So far for imitation and its worth, and the mode in which it should be employed. He would now say a word upon what had incidentally fallen from Mr. Purdie, on the subject of coloured statues. He might state upon authority, for he had often conversed with Mr. Gibson on the subject, that the purpose of that great sculptor in colouring statues was not to attain to naturalistic imitation, but rather to conventional treatment. He (Mr. Atkinson) was not an advocate for the colouring of statues. It was a most difficult question; but it was, perhaps, right to put in this plea—that statuary, when coloured, became the sister of coloured architecture. Mr. Purdie would allow that it was possible to decorate the interior of a building to such an intensity of colour, that white marble would appear cold, crude, and inharmonious. That this had been felt in all countries, and in all ages, was manifest by the uniform practice of artists. Bronze was, in fact, a colour. The employment of coloured marbles was of course the adoption of colour; so that, independently of the mere question whether they would colour white marble, which in itself was a lovely material, they could scarcely resist the conclusion that, under certain circumstances, coloured statues become inevitable. He need not say the detailed and varied management of colour in such cases was most delicate and difficult, and must be a question of subtle artistic treatment. What was the conclusion? He thought it was simply this—that a work of art depended for its worth principally upon the idea which it expressed; secondly, upon the aptness of the instruments employed as the language for expressing that idea; and thirdly, that the material might be valuable on many accounts, for durability and for other qualities, but that all such questions of material should be kept subordinate to the idea to be expressed, and the thought and purpose which the artist endeavoured to embody. Reverting to the distinction which had been justly drawn between ethics and aesthetics he would say that works executed on the principles he had ventured to inculcate, though not falling directly within the sphere of ethics, were in all points consonant, and might be made co-operative with true morals and pure religion.

Mr. VARLEY remarked on the subject of imitation, that the failures of great men were lessons to those who came after them. He mentioned that Sir Joshua Reynolds repeatedly failed to convey to canvass a correct likeness of his friend John Hunter when in his own studio. The subject was out of place; but when he painted the great anatomist as engaged in his avocation, he succeeded in producing a marvellously life-like portrait, which was the admiration of all who beheld it in the present day. Mr. Varley alluded to what he considered a great defect in portrait painting, viz. treating the subject with sombre tints instead of those bright colours in which Sir Joshua Reynolds delighted, and which served to bring out the delicate tints of the flesh with greater brilliancy and effect.

The CHAIRMAN, in proposing a vote of thanks to Mr. Purdie for his highly interesting paper, remarked that he could not agree with some of the observations that had fallen from Mr. Atkinson. He was startled to find that that gentleman justified the colouring of statues, and not only justified it, but did so in terms which appeared to contradict the conclusions he subsequently arrived at. Mr. Atkinson had said that, in colouring the statues at the late Exhibition, there was no endeavour strictly to imitate nature—not to produce the most perfect imitation possible, but merely to conform to conventional ideas—to lower high art to the conventional taste and tone of the day, and to attract admiration from those whose education had not taught them to appreciate the highest style of art. The essence of sculpture was form, and marble was a material which was specially suited for conveying the true spirit of sculpture to the mind. Colouring took away the effect upon the imagination; it destroyed the great principles upon which sculpture was based, degrading it to a lower class of art. Another branch of the subject was what should be understood by the legitimate use of imitation. There was a pleasure to be derived from the contemplation of the imitation of the beautiful objects of nature, apart from the gratification afforded by the objects themselves. The works of Barry, on the walls of the room in which they were assembled, were an imitation undoubtedly, and the perfection with which the objects were represented was in itself a source of pleasure. This was an instance of an appropriate employment of imitation. He was obliged to Mr. Crace for the suggestion as to the more extended application of the ordinary woods in the fittings of rooms. At the same time, as the practice of painting and varnishing seemed to have been almost universally adopted, it was only fair to infer that there were some good reasons for the universality of this practice, and that by some means the conclusion had been arrived at that painting was the best mode of covering defects and giving durability. It was, therefore, reasonable to suppose that the practice was supported on some grounds of public utility and economy. With regard to another branch of imitation which had been so thoroughly anathematised by Mr. Crace—stucco, he would say that the reason why ornamental brick buildings had not been erected in this country, as in Italy or Flanders, had been mainly owing to the fact that, until the last few years, the manufacture of bricks was under the control of the Excise, by whom the size and mode of manufacture were restricted within certain defined limits, which might not be departed from. But when they got rid of the excise, and were allowed to make bricks as they pleased, it had already been seen how such materials might be successfully used in the ornamentation of our street architecture. If they were to decry all imitation, they would deprive themselves of some of the highest pleasures they had. The drama had been referred to as an imitation, as it undoubtedly was; but although the drama at this moment might not flourish as it did a few years ago, yet those who recollected the elder Kean, Kemble, Young, and Macready, must feel that but for the existence of those men the country would have been deprived of a high and legitimate source of

pleasure; and they could only hope that by some change of circumstances the time might again come when greater encouragement would be given to that branch of art. He now begged to propose a cordial vote of thanks to Mr. Purdie for the very interesting paper with which he had favoured them.

The vote of thanks was then passed.

Proceedings of Institutions.

BIRMINGHAM AND MIDLAND INSTITUTE.—A course of three lectures on "Light" was delivered by Mr. James Phillips, in January and February last. Mr. H. Noel Humphreys delivered a lecture on the 5th February, on "The History of Writing." The Rev. C. P. Wilbraham, Rural Dean of Newcastle, delivered a lecture on the 15th February, upon "Iceland and its Geysers." On the 22nd and 29th February, Dr. Alfred Hill, the borough analyst, delivered two lectures on "The Chemistry of Explosive Compounds," illustrated by a series of experiments. On the 7th March, Mr. William Willis delivered a lecture on "Siemens and Gore's Furnaces." On the 14th and 21st March, two lectures "On the Grave and the Gay in Art," as illustrated by the works of William Blake, the visionary, and George Cruikshank, the humourist," were delivered by Mr. Sebastian Evans.

CREWE MECHANICS' INSTITUTION.—The eighteenth Annual Report states that, although a considerable amount has been expended in the enlargement of the Hall, additional anterooms, coffee and smoking room, increase of library, &c., the retiring council has the satisfaction of announcing a balance of £90 to the credit of the Institution. The maximum amount of any previous year's receipts has been £375, while the last year's income is no less than £576. In the educational department the past year has been one of the greatest success. The classes have been more numerous attended, and have afforded 230 youths and females means of extending that education, the foundation of which was laid in the elementary school. During the summer two pleasure excursions took place; one to Windermere, the other to Birkenhead, to visit the channel fleet. These were a source of profit to the amount of £24. A new feature in the year's programme has been the establishment of cheap concerts on Saturday evenings, which have met with such encouragement as to augur a much greater success for the future. They have been self-supporting, and have proved, not only a considerable stimulus to the amateur musicians of Crewe, but also means of innocent amusement to the people of the town and neighbourhood at the close of the week's duties. The committee thank those ladies and gentlemen who volunteered their services, and without whose help they could not hope for a continuance of these entertainments. With reference to the educational department, the council say that, while deeply sensible of the many advantages which a well-conducted institution offers, they are unanimous that "the one thing needful" for a permanent success is the good management of the Evening Classes. Upwards of six pounds was granted by the council, to be divided amongst those students who successfully passed examinations in the various branches of education taught in these classes. The local examinations included Mechanical Drawing; Free Hand Drawing; Reading, Writing, and Grammar; History and Geography; Mechanics and Euclid; Algebra and Mensuration; Arithmetic. Prizes were also given for Science and Literature, the examiners being the Rev. A. F. Chater, M.A., Rector of Nantwich, and the Rev. Arthur Rigg, Principal of the Training College, Chester. These gentlemen expressed a very favourable opinion of the proficiency of the youths. A supplemental prize was given for Political and Social Economy. Classes in the several branches of mechanical, figure, and ornamental

drawing, still continue in connection with the Institution, under the instruction of the Head Master of the Government School of Art. At the Government Examination, conducted by the Government Inspector of Schools of Art, three medals and three second grade, or highest prizes, were awarded. During the past year upwards of £20 has been expended in new books, adding 100 volumes to the former stock; thus making the total number in the library 2,504. The number of volumes issued during the last twelve months exceeds, by 1,200, that of any corresponding period. Plans and specification of patents still continue to be received, and have been much referred to on a variety of subjects. A smoking-room has been opened, and receives a fair share of patronage; it is intended to open it as a coffee-room also. A chess-room has also been added since the last report was issued. The chess club numbers upwards of 50 members. The gymnasium is in a flourishing condition. The principal entertainment during the past year was the twelfth annual *soirée*, held in June.

ART-WORKMANSHIP PRIZES.

The correspondent who addressed us on the subject of the Art-Workmanship Prizes, thus resumes his remarks of last week.

I cannot but recommend to those who compete for the first prize of the current series to use the cast from the object itself; by aid of the photograph alone, they cannot perfectly see even one face of the model, and the side-view of it—which shows an exquisitely beautiful piece of decoration in the volute and its eyes, composed as the latter are of full-blown lotus-flowers—is, one might venture to say, inexplicable, or, at any rate, so presented as not to give a full idea of the theme. It is not impossible that in some districts of the country, where natural or commercial facilities exist, clay might be cheaper than either of the materials designated for this subject. We are very much in want of workers in clay; almost all carvers are—and every one of them ought to be—possessed of some skill in manipulating that material; their skill may be cultivated by such a series of prizes as that now in question, and it is probable that a larger market exists for works in clay than can be expected with regard to such as are executed in the comparatively costly marble or stone. Upon the use of wood as a material of decoration our people seem to look with unaccountable suspicion. Englishmen were once almost at the top of the tree in wood-carving, yet how rarely do we see a modern example of this craft, except some wholly foolish and clumsily-applied bit of “upholsterer’s” work. The main obstacle with regard to the use of clay by the competitors in such a case as this is probably the difficulty, in some localities, of getting it formed, so to say, into terra-cotta. Good kilns and careful burners are, nevertheless, rife in some parts of the country, and accessible from others. Probably the Society of Arts may, at some future period, offer a separate prize for design and execution in terra-cotta.

A certain amount of invention, or rather of that power which stands next below it in art, adaptation, will be exercised by the competitors for the prizes offered in the fourth division of the first class of the series now in question. This is for wood-carving, to be rendered in the solid, from a drawing attributed to Holbein, of a design for what appears intended as an hour-glass stand. This is an admirable work, and may readily be applied to modern uses, as a watch-holder, or an ink-stand, according as the carver may please to employ its faces or its upper surface. The object rests upon three feet, and has figures of fauns at its angles, while on each of the faces between those figures appear disks, or rather shields, any of which, if made open instead of closed, would serve to hold a watch. The vigorous and expressive attitudes of the figures will commend them to the careful study of the carver. Their arms are raised above their heads, and bent back

towards the body of the work itself. Above these figures, in the drawing, a tall stem rises, this is furnished with doors, which, on being opened, display the hour-glass itself. Between the body and the stem is a mass of beautiful mouldings, but the most effective section of the design is its superb top, whereon stand figures of boys, each holding a scroll spread out, *displayed*, as heralds say, and inscribed on its surface. A compass card seems to have occupied the upper surface of the body; this is invisible in the design, but is sufficiently indicated by a supplementary illustration that is placed by its side. The spirit of this work is such that no one endowed with artistic feeling will overlook it. In almost every section genius is evinced. The designer was a master of his craft, and could as well give expression by the subtle curve and springiness of the scrolls forming its feet as by the graceful poising of the boys and the elegance of the fauns. As produced in the “romantic” spirit of the German Renaissance style, the composition is beyond praise. The execution of the figures and their perfect combination with the minor elements of the work are unchallengeable. The whole forms a model for the wood-carver’s art. Whoever wins the first or the second prizes offered for this article will deserve great praise. All who compete will profit by studying it.

The next theme for competition that presents itself as calling for special remark is, if possible, superior to the last. It is so inasmuch as it is designed in a style that is wholly pure and unmixed with the *quasi*-grotesque motives of German Renaissance art. Probably for modern uses the latter is perfectly suitable, but, to an eye trained by long contemplation of severe models, there is something surpassingly attractive in the thorough elegance and spirit of the former. This is a picture frame, to be carved in wood, after an Italian work, probably executed in Venice about 1550, and now in the possession of Henry Vaughan, Esq. With all the richness of this work the character of grace predominates. Grace is, in all decorative compositions, the supreme quality. The frame itself shows a “flat,” upon which is placed an infinite variety of lovely scrolls and foliage, in the knots and on the branches of which little boy-genii are sporting with that life-like vigour and spirit which distinguished the best days of Italian design. The angles of the frame are particularly worthy of attention, because that portion of such a design as this is the test of power in treatment. A scroll will, if dexterously managed, almost compose itself after its elements are decided upon, and, with due care, variety enough may be imparted in minor parts, while the scroll of foliage proceeds onwards to its end. At the angle the difficulty occurs of happily uniting two lines which are perpendicular to each other. In the work now under consideration this difficulty has been triumphantly dealt with. The exquisite carving displayed in the small figures of lizards, peacocks, and other birds, such as cocks and partridges, is surprisingly full of beauty and fancifulness. A very pretty point of design, which is thoroughly Italian in character, is observable in the middle of the lowest side of the frame. This is filled by a springing fountain; on each side of it an elegant grotesque demi-figure, whose tail runs into the foliage, presents itself. The crispness and clearness of the leafage, no less than its tender and pure elaboration, are beyond praise.

By comparing the last-named example with that which immediately precedes it in the order of the programme of prizes, the student will discover a marked distinction, not alone in their design, but in their execution. I refer now to the head of a harp of the period of Louis XVI. or, to speak more correctly, that of Louis XV. (1715-1774). The latter was, with all its shortcomings, the better and nobler period of French design. Anyone can see that between the periods of the Italian picture-frame and that of the head of the harp, something had come into play which was potent enough to change all men’s ideas of art. If I were addressing a technical audience it would

suffice to say that art had, in the interval, lapsed into "decoration." Bold, and in many respects beautiful, as is the head of the harp, it lacks the exquisite refinement, the perfect elegance, and vigorous grace of the foliage and animals on the picture-frame. It is not because one is more elaborate than the other, for this is hardly the case; nor because the object upon which the artist had been employed is in the former superior to that of the latter as a field for the exercise of decorative power. The truth is, that to an able designer the harp-head supplies by far the noblest opportunity; indeed, there are few finer themes in the reign of ornamental design than such a one, yet, with this singularly great advantage to help him, the Frenchman has not even approached the Italian who went before him. Into the history of the great change in the well-spring of modern art this is no place to enter. Let it suffice that the "naturalistic" spirit of times later than those which produced the Venetian work wrought so effectually upon design that artists sought to imitate all they saw before them, and in the effort abandoned much that had been learnt by their predecessors. The most valuable thing thus abandoned was the right of selection or choice of beautiful elements of natural forms. Had they given, as many of the Germans did, unflinching obedience to their own law of imitation, the French artists of the period of Louis XV. might have done better, but decorative design, as in the harp-head before us, presumes a departure from nature, accordingly that departure should be thorough and free of mere imitation; if it is not so, the clash of two principles of art is, as here, painfully obvious in a single figure. How, for example, shall the figure of a genius whose body terminates in foliage be treated as a simply natural object?

The harp-head now in question is composed principally of the figure of a boy-genius, who seems to balance himself at the highest point of the instrument. His action, although beyond certain limitations of art, is full of vigour and grace. Its fault is in an exuberance of unchastened form. The circle predominates in all its elements, whereas, in the decorations of the picture-frame, the elemental line is flowing and flexible, and, so far, better adapted for decorative service. The tail of the boy forms a scroll of rich but rather ornate character. Festoons, which are elaborately wrought, form essential features of the design, but, as they are merely imitative in execution, they cannot be very highly estimated. The festoon is, in its very nature, but a poor and somewhat vulgar substitute for the ever elegant scroll or running foliage. Beneath the figure of the boy, and as if suspended over the top of the harp, is a satyric mask with the usual accompaniments of Pandean pipes, wreaths, horns, fruit, flowers, &c. The whole forms a composition rich and varied enough to please the untaught eye, but, inasmuch as it indicates a return to the Roman manner of copying natural facts, in preference to an intelligent dealing with them in the power and spirit of the Greek, Gothic, and true Renaissance carvers, it is inferior to the works produced by those masters of design. It will be obvious to everybody that the intelligence called into play by the execution of a festoon copied from natural flowers, is inferior to that exercised in the mastering of the elemental forms of those flowers, and composing a new thing out of them. This is the difference between the arabesques of the Italian work and the bunches of fruit, &c., of the French one.

No question of styles or schools is involved in the next example I select from the list of prizes. Raphael's "Graces" is too well known and too beautiful a theme to need praise of mine. As a study for *repoussé* work in metal, as well as for enamel painting, it is perfect. Its adaptability to processes depending on pure form in the one case, and on pictorial treatment in the other, is worthy of note. With regard to the theme of two boys selected from Raphael's cartoon of "The Sacrifice at Lystra" as the subject for the first prize for painting on porcelain, it seems to the writer much inferior in value to that of the "Graces," inasmuch as it is rather pretty than beautiful,

and whether such was, or not, the character of the cartoon in its original state, that famous work is certainly not now beyond challenge in execution. It does not seem to be generally known that there exists in the library of Vienna a group of antique female statues, undoubtedly representing the Graces, Aglaia, Thalia and Euphrosyne. This group is nearly life-size of three beautiful females, of an earlier and less developed period of life than that Raphael depicted, but so nearly resembling, in their attitudes, those in the design before us, that there can be little doubt that the artist availed himself of the antique conception. There are many similar versions of the theme in existence.

I ventured to enter freely upon the subject of the true and the false arabesques, as displayed by the Italian picture-frame and the French harp-head, because the spirit of the remarks upon the former may be applied to the Flemish salver—designated as the model in the second section of Class 2 (*Repoussé* work). The same may be said with regard to the arabesque after Lucas Van Leyden—used for the class of etching and engraving on metal, and of the German work of a later date, which supplies a theme to the second sections of the enamel painting and porcelain painting classes, as well as to the class of engraving on glass. It would be hard to find nobler subjects than these.

On another occasion I may be allowed to offer some observations upon the themes chosen for the classes of chiselled iron, ivory carving, bronze chasing, cameo cutting, die sinking, gem engraving, &c.

Fine Arts.

FRENCH OPINION OF ENGLISH ART.—M. Ernest Chesneau, a writer on art, has recently attracted considerable attention by two small books on the art and artists of France and England. The first of these works is entitled, "Les Chefs d'Ecole—Painting in the Nineteenth Century," and treats of David, Gros, Géricault, Decamps, Meissonnier, Ingres, Flandrin, and Delacroix. It has reached a second edition, if not a third, and has aroused attention by the freshness and originality of the tone of the criticisms. M. Chesneau belongs to what is called, in France, the romantic, but which would be more fairly designated the natural school; he is severe on the *quasi* classicism of David and the colourless character of M. Ingres's works. His chief admiration is reserved for Gros, Flandrin, Meissonnier, and, especially, Eugène Delacroix. It is only from a critic of this school that English art, peculiar as it is, and resembling none other, could possibly obtain anything like due appreciation. Any French critic looking at the works of English artists, and measuring them by the artificial rules which guide the majority of painters on the Continent, would infallibly arrive at the conclusion, once drawn in France with respect to Shakespeare, that although there might be much evidence of natural genius, there was no art in the true sense of the word. M. Chesneau is not of this school, and therefore his recent work, entitled, "L'Art et les Artistes Modernes, en France et en Angleterre,"* will be read with interest by all who take an interest in the subject. The author takes for his text the English works exhibited in Paris at the universal Exhibition of 1855, and in London in 1862. The first sentence reveals a curious fact with reference to the acquaintance of the Continent with the painters of England:—"There is an English school," and, M. Chesneau adds "it has existed for more than a century, and yet is unknown in Europe." He describes the astonishment created in France by the appearance of a long series of pictures in that Exhibition which evidently came from no school with which French criticism was familiar. "Up to that time," he says, "we

* (Paris, Didier and Co.)

had refused to acknowledge the possession of any artistic quality in the English mind; then, by an unreflecting impulse, the result of surprise, it was lauded far too highly. This infatuation," he adds, "which is not yet quite passed away, would have been more marked, and moreover excusable if, in 1855, as now (1862), the works of the English painters of the eighteenth century had figured at the Exhibition." M. Chesneau will not admit that Hogarth was, in the high acceptance of the term, an artist; he denies him drawing, colour, composition, and style, but he acknowledges that his pictures, when once seen, are not easily to be forgotten for their originality, force, and satirical humour; and of the pictures by that artist, exhibited at South Kensington in 1862, he says:—"The attitudes, the action—astonishingly true and infinitely various—are not only always lifelike and just in their triviality, but are sometimes noble and touching. In some of the figures of women and children there is elegance and *naïveté* that perhaps even Reynolds and Lawrence could not have expressed—as, for instance, in the 'Marriage à la Mode,' the girl who is drying her tears at the quack-doctor's, and the young person in a rose-coloured skirt and black mantle, in the picture of the 'Conversation.'" Reynolds and Gainsborough draw forth earnest admiration from M. Chesneau, who says, "that if British art had produced many such painters as these, the French school might really feel some alarm." His appreciation of these artists well deserves attention; his criticism is careful and discriminating, and few will differ with him when he says:—"The talent of Reynolds exhibits a magnificent conquest over the will; that of Gainsborough, the spontaneous opening of a flower going through its natural formations to the production of its fruit. This fruit is of an exquisite flavour." M. Chesneau criticises, at some length, most of the principal works, both of Reynolds and Gainsborough, with an affectionate admiration. Lawrence charms him by his pretty graces; he admits his fascinations, but he cannot overlook his want of force, truth, and firmness. For West, Fuseli, and Etty he has but small admiration. Wilkie can scarcely be appreciated by a foreigner; and M. Chesneau, while admiring his originality, does not, evidently, fully appreciate his intense humour and power of observation and reproduction. John Constable stands high in the estimation of M. Chesneau; but the artist that interests him most deeply of all, perhaps, is Turner, of whom he says:—"He had but one desire—a dream of prodigious audacity—he would paint light." It is a bold and a happy stroke of criticism. M. Chesneau is as severe as most critics on what he calls the madness of Turner's last works; but he says:—"It is impossible to give, in a few lines, any idea of the imagination of this artist; the analysis of his works would require a volume." And further:—"Turner was an artist of genius, too rarely complete, but often sublime." These few notes will be sufficient to recommend M. Chesneau's work to the attention of English artists and amateurs, but it is evident that he has not yet become intimately acquainted with the whole school of British art. Mulready is among the artists of whom his knowledge is undoubtedly but small, but at the same time the spirit evinced in his criticisms is so clear and honest, that it may be taken for certain that he will seize fresh opportunities of enlarging his observation, and thus aiding in the diffusion of a knowledge of English art and artists on the Continent.

COPYRIGHT.—Mr. Black has withdrawn his Copyright Bill, and obtained leave to substitute for it a bill for the consideration and amendment of the law on this subject.

SALE OF ILLUMINATED MANUSCRIPTS.—The recent sale of the famous manuscripts belonging to the Duchess de Berry drew all the Quartier St. Germain, as well as all the artistic and antiquarian world, to the Paris mart, and the prices obtained exceeded all expectation. The chief lot consisted of one of the most famous books in Europe, the "Livre d'Heures of Henry II. and Catherine de Médicis," a little volume, not more than four inches long, bound

in red morocco, and bearing the monograms of the king and queen. The manuscript is illustrated by fifty-five miniatures of the royal family of France, executed with great ability. Part of these portraits were executed specially for the work, the rest having been since added as illustrations; they include, amongst others, likenesses of Henry I., II., III., and IV., Francis I. and II.; Charles IX., Louise of Savoy, Margaret of Orleans, two of Mary Stuart, Elizabeth of France, and Catherine de Médicis. The little gem was put up at 25,000 francs, but the biddings soon reached 60,000, when the last competitor, an Englishman, gave in, and the Emperor was announced to be the purchaser. It is understood that the manuscript will be placed in the Louvre. The sale consisted only of twenty-five lots, which, however, realized the sum of 103,000 francs (£4,120). The other principal items were:—A book of prayers, written before 1231, for Louise of Savoy, mother of Francis I., ornamented with miniatures, purchased for the Musée des Souverains, at 3,210 francs; "Liber de vitâ Christi" (de Ludolphe le Chartreux), illustrated by many exquisite miniatures, 15th century, 3,800 francs; "Gaston Phœbus's Book of the Chase; and "The Book of Medicine for all kinds of Birds," by Jean de Franchiere, 15th century, 5,000 francs. These two manuscripts are illustrated at almost every page with scenes of the chase. A magnificent manuscript, "Heures Satines," of the 15th century, illustrated with 107 large miniatures and twenty-four vignettes, recalling the style of Pouquet, and supposed to be by a pupil of his school, brought 3,050 francs. Several of the lots were purchased for the Imperial Museum.

STAINED-GLASS EXHIBITION.—The arrangements for this exhibition, which is to be held in the South Kensington Museum, are now nearly completed. The exhibition will open very shortly.

FLORENTINE MOSAICS are now used with good effect in ornamenting the binding of books. The mosaics are let in either as a centre-piece or in the corners, and the idea might be carried out very well with the earthenware tesserae made in England.

THE Ghiberti Gates.—Arrangements have been made by the South Kensington Museum for taking casts of these celebrated gates, and also of the Perseus, by Cellini, from which copies are to be reproduced in metal for the collection at the Museum.

TAYLOR PRIZES (IRELAND).—It is known that the sum of £2,000 was bequeathed by the late George Archibald Taylor, of Dublin, for the promotion of art in Ireland. This has been applied to the establishment of a perpetual endowment for the encouragement of art-students, the management of the scheme being entrusted to the Royal Dublin Society, in conjunction with the trustees of the will. For the year 1864 the trustees offer the following prizes, open to art students of Irish birth or attending a school of art in Ireland, to be awarded at an exhibition to be held on the 23rd November, 1864, at the house of the Royal Dublin Society. 1. For the best Drawing or Cartoon in Chalk, the figures to a scale of three feet (two or more prizes each), £10. Subjects—"The Good Samaritan." "The meeting of Æneas and Dido, after the Shipwreck." 2. For the best Landscape in Oil Colours, £20. To be increased or lowered in amount or wholly withheld, according to the merit of the works. All works must be delivered before two o'clock on the 14th of November, 1864, at the house of the Royal Dublin Society, Kildare-street, Dublin. The prizes are open to all students of art, of either sex, who shall have attended for two years at least a school of art in Ireland, or who, being of Irish birth, shall have attended for a like period a school of art elsewhere, and who shall produce works of art displaying conspicuous merit or high promise of future excellence, at an Exhibition to be held annually in Dublin. When high artistic talent shall be manifested, a Taylor Scholarship will be awarded, which may be held for a second and a third year, provided the student shall produce in each year a work of sufficient merit. The

prizes are awarded upon the report of judges, one of whom is chosen by the Council of the Royal Dublin Society, another by the Royal Hibernian Academy, and a third by the Governors and Guardians of the National Gallery of Ireland. Last year the judges awarded to Mr. J. Fergus O'Hea, for his picture, "Revenge and Pity" (Collins' "Ode on the Passions"), a premium of £10, but their report on the competition is not favourable. They "express great regret that the expectations of the judges of last year, in recommending a defined and simple subject for competition, have not been realised. In each of these productions they have sought in vain for examples of correct proportion and accurate design; and it is obvious that while the youthful students have been tempted to indulge largely in the attraction of colour, they have disregarded the more important requirements of patient and conscientious study of the living models." To the work of Mr. J. Fergus O'Hea, in which these deficiencies are, perhaps, the least conspicuous, they recommend the award of the above named premium.

Manufactures.

GRATUITOUS SCHOOLS AT MULHOUSE.—Many departments are just now taking up the question of establishing communal libraries for the use of the industrial and rural population of their districts, and it is interesting to know what has been done by eight industrial establishments at Mulhouse, in the way of providing instruction for their workpeople. In three of these establishments schools have existed since 1848, in three others, schools have been formed in 1854 and 1856, and two have opened schools in 1863. In six of these schools the lessons are given in the day, during the hours of work, and in two others during the evening, after work is over. In all the schools reading and writing in French and German, and the four rules of arithmetic are taught. Four of these establishments have libraries attached, and the books consist chiefly of voyages and travels, history and moral tales; periodicals and newspapers are taken in, but all publications of extreme views in religion or politics are excluded. In one of the establishments there is joined to the school and library a workroom for the girls, under the direction of the wife of the manager of the factory. All the girls under 16 are assembled twice a week in this workroom, and are taught to sew and mend their clothes, so as to fit them in due time for their duties as mothers of families.

TURIN COTTON EXHIBITION.—An exhibition of the various kinds of cotton cultivated in Italy has been organised at Turin, by the exertions of M. Devincenzi, Member of the Italian Parliament, and who represented Italy at the Exhibition of 1862, as Commissioner-General for that country. The number of exhibitors is 207, coming principally from the Tuscan Maremma, Sardinia, Sicily, the Campagna of Rome, and the Neapolitan provinces. The number of different cottons shown is 685; of these 306 are Chinese (white), 48 Chinese (brown), 82 of the herbaceous species, 7 of the hairy species, 80 of New Orleans, Louisiana, and North Carolina, 110 Sea Island, and 52 of other qualities. This enumeration shows how seriously cotton cultivation has been taken up in Italy, and the quality of the cotton exhibited is highly satisfactory. All that is wanted is to familiarize to a greater extent the Italian cultivators with industrial processes. The prospect is most encouraging. A company has just been formed in Milan for the cultivation of cotton, on a large scale, in Sardinia. The company has already purchased machines and implements for its operations, which will commence upon 250 hectares of land in the territory of Oristano.

PRICES OF EARTHENWARE.—The earthenware manufacturers of the Potteries have advanced the prices of earthenware 5 per cent. on the net value in the foreign trade, and from 5 to 7½ per cent. in the home trade. This rise is occasioned by several recent advances in the price

of coals, and by the increased value of borax and several other articles used in the manufacture.

CORNISH MINES.—The annual consumption of timber in Cornish mines amounts to nearly 100,000 load, and involves an expenditure, for Norway timber alone, of about £200,000. Large quantities of American timber are also used, averaging in value about £40,000.

Commerce.

COAL FIELDS IN BRAZIL.—A few years ago reports were current respecting a vast coal-field, sixty square leagues in extent, lying about forty miles from the coast of the Atlantic, in the province of Rio Grande do Sul, but nothing precise or definite as to the truth of the statement was known. Within the last year or two, however, Mr. Nathaniel Plant has been surveying the southern province for the Brazilian Government, and his official report confirms the fact of a valuable and extensive coal field existing there, of which full details were recently laid before the Manchester Geological Society. The locality is on the extreme south, just on the border lands between Brazil and Uruguay, at a distance from the coast in a direct line of about sixty miles, but an extensive shallow lake intervenes, and the sea-board is made up of a vast extent of dangerous sands and low banks. The nearest point to which the coal approaches a port of embarkation is about twenty miles above the mouth of the Jaquaro, so that water carriage exists from the Atlantic port almost up to the coal-field. The area of the coal-field is conjectured to be about 150 square miles. An engineer is at present surveying the district for the purpose of estimating the cost of a single line of tramway, an item of expense which must be comparatively small in going over a country which is described as being as level as a billiard table. The principal features of this coal-field, as far as it has been examined, consist in the great depth of some of the coal-beds and the facilities which it presents in a long escarpment for getting the coal by open quarrying. A second coal-field lies away some hundred leagues to the north, near Porto Alegre, the capital of the province. A third coal-field has been discovered in the small province of San Catharine, lying N.E. of Rio Grande do Sul; it is reported to be a deposit of about 80 square miles, and lying far from the coast in a range of hills. It appears not to be so readily got at, nor is the coal so good and abundant as it is in the greater deposit of Candiota. These are the first instances of coal having been found and examined in the great empire of Brazil, with its three millions of square miles of country. It is a most valuable thing to the Brazilian Government, who annually import for gas and steam purposes 250,000 tons of coal at 49s. per ton. The Brazilians, if they are wise enough to open these fields of coal, will be enabled to supply themselves with coal at 18s. per ton, and also to form a profitable depot for the supply of the great ocean steamers to India, China, and Australia. It seems to be a bituminous coal and well adapted for steam purposes and smelting; it has also been successfully tested in the Rio gas works. The probability is that this is only the commencement of many discoveries of the kind in Brazil. The fears that have so recently been expressed that we shall exhaust our British coal-fields, will be very much diminished if we discover a few more coal-fields like these in South America. The latest advices by the recently-arrived Brazil mail report that the explorations of the coal mines at Candiota, Jaquaro, and Chico, had, in every instance, confirmed the statements as to the extent and richness of the beds.

JUTE.—The supply of the better qualities of this fibre continues limited, and prices have advanced, but with common the market is superabundantly supplied. The stock in London and Liverpool at the close of last month was 12,259 tons, and there are also 51,412 tons afloat,

or more than double the quantity at sea this time last year.

EXPORTS OF FURNITURE.—The value of the exports of cabinet and upholstery wares of British manufacture has averaged during the last five years about £270,000. Last year it was £302,016; in 1862, £259,156. The largest quantities sent to particular localities were, to Australia, £82,000; to the Channel Islands, £37,000; to the Cape and Natal, £27,500; India and Ceylon, £17,000; China and Hong Kong, £17,300.

IVORY.—The quarterly sales in London in February comprised 100 tons, of which about 45 were East Indian. The whole met with good competition. The large teeth realised an advance of £3 to £4; cut hollows £1 to £2; and scrivelloes, 10s. to 20s. per cwt. in comparison with last sale's rates; cut pieces for billiard balls, and ball scrivelloes, went off steadily, and in some instances higher.

TANNING MATERIALS.—The imports of foreign oak bark into London last year were 1,520 tons:—of Mimosa, or Wattle bark, 2,940 tons; of Valonia, 7,160 tons; of Terra Japonica, or Gambier, 7,000 tons; and of Cutch, 862 tons.

Colonies.

SIERRA LEONE.—A committee of gentlemen, presided over by the governor, have decided upon holding an industrial Exhibition here, of native art, manufactures, agriculture, live stock, and African produce of every kind, at the end of the year. Such exhibitions have been considered very effective in Liberia, and if the colonists of Sierra Leone can be thereby stimulated to a healthy emulation, something like a development of the natural resources of the colony may speedily take place. At present coffee is quite wild, in the bush, but not thought of. The sugar cane, arrowroot, ginger, the ground nut, and every kind of fruit and vegetables would flourish in abundance, if the natives would till the ground and give it even common attention, but they will not, preferring to idle their time away in useless absurdities. Sierra Leone is the great nucleus of education and intelligence in Western Africa, and if she once really casts off her industrial sloth, agricultural industry will be stimulated in all our colonies, posts, or settlements, on that coast. The African Aid Society, of London, has set on foot a subscription to assist this scheme, and £400 has already been raised in the colony, but £1000 was wanted to carry it out effectually.

THE PACIFIC STEAM ROUTE to Australia, which has been so often agitated, is at last to be carried out, the Intercolonial Royal Mail Steam-packet Company having undertaken the contract with the New Zealand and Australian Governments, commencing from Panama. The voyage thence to New Zealand and Sydney is stipulated to be made in thirty-seven days, but is expected to be performed in thirty-five, so as to bring the course of post between Australia and England within four months. By Panama New Zealand is 2,000 miles nearer to England than by the present overland route, and 4,000 miles nearer than by the Cape of Good Hope.

AUSTRALIAN WOOL.—The progress of the occupation of sheep farming and the rate at which the flocks have increased and spread throughout the Australian colonies is remarkable. In 1810, when Germany and Spain were the only countries producing merino wool, Australia exported its first bale of 160 lbs.; but in 1860 it sent to the mother country not less than 60,000,000 lbs., of which the Germans were large purchasers. There was in 1810 an experimental clip of 160 lbs.; in 1820 the export had reached 99,415 lbs.; in 1830, 1,967,309; in 1840, 9,721,243; in 1850, 39,018,221; in 1860, upwards of 57,000,000; and in 1863, the largest return, 76,000,000. Great as has been the increase throughout Australia, the progress

in Queensland has been more rapid than any other portion of the colonies. The mildness of its climate and the richness of its pastures have contributed to this result while the wool produced there realises the highest price in the London markets.

RAILWAYS IN NEW ZEALAND.—The Moorhouse railway tunnel was lately thrown open to public inspection. The length of the excavation is 2,102 feet. A brick lining, 5 bricks thick, extends the whole length of the soft ground, a distance of about 150 yards. The tunnel was visited by 2,000 persons.

NEW ZEALAND COTTAGE BUILDING COMPANY.—A meeting of gentlemen interested in the project of building cottages, for the better accommodation of the labouring classes, was held on the 11th January, at Canterbury. They reported, as the result of their inquiries and calculations, that the average cost of seven detached cottages, of from three to six rooms, to be erected in the neighbourhood of Christchurch, would range from £300 to £500 per pair. The land is to be obtained within the town belt, in the town reserves, at prices varying from £300 to £500 per acre. The committee recommend that a company be formed, with a capital of £15,000, of which £5,000 be invested in building twelve cottages, of three rooms each, at £300 per pair, on one acre of land costing £400, and twelve cottages, of four or five rooms each, at £400 per pair, on one acre of land also costing £400. These cottages would let respectively for 12s. per week, and £40 per annum. The committee also recommend that a lodging house for single men should be erected, at a cost of about £2,000, accommodating about 30 or 40 persons, each of whom would have a separate bed room, with the use of a dining hall and reading room.

THE IMPORTS INTO VANCOUVER ISLAND during the year 1863 amount in value to 3,523,053 dols. Of these goods to the value of 1,880,117 dols. came from San Francisco; from England, 1,432,521 dols.; from Oregon, 100,604 dols.; from Puget Sound, 242,781 dols.—the remainder from China, Sandwich Islands, &c. Compared with the year 1862 there was an increase of importations from England to the amount of 738,243 dols.; from Portland, 33,234 dols.; from Puget Sound, 17,988 dols.; but there has been a falling off from San Francisco of 464,949 dols. The total diminution of imports from America amounts to 413,727 dols. The total increase of imports from all sources for the year 1863 amounts to 250,273 dols. During the year 1863 there were exported from Victoria to British Columbia, goods to the amount of more than 2,000,000 dollars. Within the last six months Vancouver Island has sent to San Francisco merchandise to the value of 143,879 dols.; to Puget Sound, 46,175 dols.; to Oregon, 9,357 dols., and 348 dols. to other American settlements, making, in all, for six months, 200,761 dols. Of the 3,500,000 dols. imported into Victoria, about 2,500,000 are re-exported. Every white person appears to consume about 115 dollars-worth of imported goods annually, two-thirds from or through America. The yield of the gold mines of British Columbia during 1863 was about 5,000,000 dols. About 22,000 tons of coal were taken out of the mines during the same period. Victoria is assessed at 5,000,000 dols. Many lots sold in 1858 for 200 dols. now realize 20,000 dols. Mining flourishes, agriculture languishes. About 1,100 vessels entered Victoria harbour during 1863, tonnage, 171,777—half British—the rest chiefly American.

EMIGRATION TO AUSTRALIA.—A Launceston paper says:—"The chief thing that appears to be wanted is additional hands to fell the forest, clear the scrub, and till the soil. No system of immigration yet devised has proved equal to the supplying of the requirements of the colonies. The attractions of gold have lured many from abroad, but a considerable percentage of these immigrants constitute a floating population that flocks from one gold field to another, but never settles down to steady industry. Hitherto the plan adopted has been to sell the public lands, and apply part of the profits to immigration, which has

thus been carried on by fits and starts. In many cases the immigrants have not been of a desirable character, and eventually, from a restless disposition, have left the colony at whose expense they were brought out to Australia. It appears, however, that a much less expensive plan could be adopted, and one which would not only secure a superior class of immigrants, but would fix them to the soil, and ensure the gradual settlement of the country. It simply consists of surveying blocks of land into, say twenty-acre sections, with a road frontage, and immediately behind sections of the same size, to which a presumptive right should accrue to the occupants of the road. If these allotments were numbered and reserved exclusively for section in England the desire of possessing a freehold is there so strong that many with some means and young families would be induced to avail themselves of the same. Every person paying his or her passage should be entitled to a twenty-acre section, with the right of purchasing other twenty contiguous acres at a moderate price. If some such method were adopted Australia might be colonized more quickly than in any other way, without any risk to the several governments, and with the certainty that the immigrants would be of a superior class and would become attached to the soil."

Obituary.

JOHN LAWTON, principal partner in the well-known firm "the Executors of the late George Lawton," woollen manufacturers of Micklehurst, was born in Mossley, and at an early age evinced a degree of intelligence as remarkable as it was unusual in boys of his years. He was gifted with a retentive memory and observant mind. His advancement in intellectual studies was both rapid and satisfactory. He became a staunch promoter of mechanics' institutions, and of every other kindred society that had for its object the social and moral as well as mental advancement of the working classes in his neighbourhood. Ere he had attained his majority his father died, but so much confidence had he in his son's ability, that, some time before his death, he unhesitatingly placed the chief management of the business in his hands; and those who have marked the progress which has attended that important manufactory know how truly just was the opinion which the dying father formed of his youthful son. "Young Lawton," as he was called in the markets—for he was a mere boy at this time—not only bought the wools, a business which required the nicest judgment combined with great caution, but he also, aided by his brother's more practical experience, superintended the manufacture of them into flannels, and finally he sold them; so that in fact, he performed successfully the duties of three individuals, and continued to do so till within a short period of his death. The breaking out of the American war, which closed so many cotton mills in Lancashire, presented a favourable opportunity for the display of that Christian charity which formed a marked trait in the character of Mr. Lawton, and he at once, with the ready concurrence and assistance of the other members of the firm, engaged as many hands as he could find room for—working their mills night and day. He died on the 8th of October, 1863, in the 28th year of his age, and was interred in the family vault in the church of his native village. He was elected a member of the Society of Arts in 1862.

Notes.

A BRIDGE OVER THE STRAITS OF MESSINA, according to the Italian journals, is in contemplation, for uniting Sicily to the main land. The bridge proposed would be a suspension one, on a new system, the chains being of cast steel,

and strong enough to support the weight of several railway trains.

IMPROVED DWELLINGS FOR THE LABOURING CLASSES.—The corporation of London has authorized the expenditure of nearly £30,000 in the erection of a number of improved dwellings for the labouring poor in Clerkenwell, on the plan lately adopted with great success in a crowded part of Finsbury, by Mr. Alderman Waterlow. Having regard to the demolition of houses in the City, chiefly occupied by this class of the community, caused or threatened by various public works and railway undertakings in progress or in contemplation, the corporation have determined to make an effort to compensate them for their loss, and to assist them to obtain healthy separate homes, and that without overtaxing their means or compromising their independence. Acting under a power conferred upon them by the Clerkenwell Improvement Act, they now contemplate the erection, on a plot of vacant ground on the west side of Farringdon road, of three separate blocks of buildings fronting Farringdon-road and Ray-street, at an estimated cost of £28,600. Accommodation will thus be provided for 160 families, 80 of them having three rooms, and 80 having two rooms each, with all suitable conveniences. In the general arrangements every care will be taken to ensure the domestic and family comfort of the occupants, and by having a direct access from the street to each set of rooms the privacy of distinct dwellings will be secured. The basements of the various blocks will be used for warehousing purposes, and the ground floor as shops. They are of opinion, however, that dwellings of this class should under no circumstances wear an appearance of exclusiveness, but should harmonise to some extent with the general character of the surrounding property. A design for the buildings has been approved by the Common Council, and the erection of them will be commenced forthwith.

CAMBRIDGE LOCAL EXAMINATIONS.—By the sixth annual report on the Examination of Students not members of the University, it appears that the local examinations were held last December in the fourteen places in which they were held the previous year, and also at one new centre in England, namely Torquay. But the most remarkable circumstance connected with the last examinations was the extension of them to the colonies, by the successful examination of ten candidates at Trinidad. This success has been owing to the removal of all the difficulties which might have arisen in communicating with so distant a centre; partly by the great assistance rendered by the governor of the colony, and the gentlemen he appointed to superintend the examination; and partly by his Grace the Secretary of State for the Colonies, the Duke of Newcastle, who permitted the examination papers to be sent in sealed parcels to the Governor through the Colonial Office. The whole number of candidates entered was 629; 514 juniors, and 115 seniors. This number of juniors is 57 more than the number last year, and 133 more than the number in 1861. The increase over last year in the case of the seniors is 8, 7 of whom are accounted for as the candidates at Trinidad. The increase of the juniors, however, is not owing to the new centre, Torquay, for this centre only just makes up for the diminution of the number at Exeter and Plymouth; it is rather due to a decided increase at Bristol and Cambridge, and also to a small increase at most of the other centres, except at London and Sheffield, where there is a slight decrease. There appears to be a slight increase in the total number of both seniors and juniors who have passed the examination, but the per centage of juniors who failed in the preliminary part of the examination, which has for two years been 11.1, is this year 18.6, and the percentage of seniors is double that of last year.

EDUCATION IN FRANCE.—The French Government has during the last few years made most laudable endeavours to extend the benefit of education, and to raise the character of the public schools, and the present Minister

for Instruction seems to surpass his predecessors in his endeavours to carry out these important objects; the common schools, those for instruction in matters relating to the fine and industrial arts, and those for technical training have all in turn engaged his attention, and have been benefited thereby. A bill has just been presented to the Corps Legislatif for the organization of what is there called special secondary education. According to the terms of this draft law, the instruction to be given in future in schools coming under the above head, and being dependent on the minister of public instruction, will include the following subjects:—Moral and religious instruction, the French language and literature, living foreign languages, history and geography, the outlines of legislation and of industrial, rural, and sanitary economy, applied mathematics, physics, chemistry, and natural history, with their application to agriculture and industry, commercial arithmetic and book-keeping, lineal and ornamental drawing, imitative art, vocal music, and gymnastics. The progress that has been made in England of late, especially in artistic and middle-class education, has attracted great attention in France, and several Imperial commissioners have crossed the Channel and made careful inquiries into the systems in operation and he results obtained therefrom, and it is evidently important that the friends of education in Great Britain should study with attention the course which is being adopted by our nearest neighbours, and the progress that is being made by them in such matters. The minister has also just appointed a special commission to inquire into the condition of musical education, and to draw up a scheme for accommodating it to the system of instruction. The commission consists of M. Bavisson, Inspector-General of the University of Paris; Félicien David and Laurent de Bille, composers; M. Marmontel, professor of music at the Conservatoire; Georges Haine, conductor at the Opera; with the secretaries of the Minister of Public Instruction and of the President of the Corps Legislatif.

SOUTH KENSINGTON MUSEUM.—The following is a comparative return of the visitors during Easter week for seven years, from 1858 to 1864, all the days being free days:—

	Monday.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total.
1858	6,151	3,046	1,219	988	1,614	2,200	15,218
1859	5,000	6,367	2,933	1,809	2,516	1,393	20,020
1860	9,648	7,635	4,107	3,527	1,705	1,486	28,108
1861	7,100	6,017	3,205	2,845	2,662	3,090	24,919
1862	16,332	8,959	5,275	4,328	2,703	4,451	39,048
1863	7,322	5,078	1,589	1,603	1,483	3,001	20,076
1864	8,559	5,983	2,235	3,032	2,402	5,307	27,518

ACCLIMATISATION SOCIETY OF GREAT BRITAIN.—A meeting of this Society was held on Monday, the 4th of April, in the Great Room of the Society of Arts (lent for the purpose by the Council), when several papers were read on the productions of the various animals, birds, fish, and plants in the colonies that could be acclimatised in this country. Mr. Higford Burr occupied the chair. The first paper was by Mr. Frank Buckland, "On the Reports received from Hong Kong, Labuan, Tasmania, and Western Australia, relating to Fauna and Flora, suitable for Acclimatisation in Great Britain." Mr. Lowe, the joint secretary of the society, then read a paper on the culture of oysters. He traced the history of the oyster from the times of the Romans, and referred to the history the elder Pliny had written of the habits of that fish. If anything were necessary to prove the importance of cultivating the oyster, it would be found in its market value. Two years ago they were worth 40s. per bushel, and now they fetch 70s. per bushel. Common oysters, which fetched 12s. to 16s. a few years ago, were now from 18s. to 24s. The price of natives used to be 4d. per dozen, but they were now 6d., 8d., 10d., and in some places 1s. per dozen. He then gave some very interesting

details respecting the oyster, and urged that many miles of our coasts which were now unproductive would make admirable oyster beds. Mr. Arthur Crichton read a paper "On the Game Birds and Animals of Canada," which led to a short discussion; after which votes of thanks were given to the gentlemen for their valuable papers, and the proceedings terminated with a vote of thanks to the chairman.

Correspondence.

ARTIFICIAL LIGHTING.—The observations I made in the discussion on Mr. Paul's paper, on the 1st inst., were in reply to his statement—"It was a mistake to suppose that petroleum had an advantage over coal gas in producing less heat, for the production of heat as well as of light depended upon the amount of carbon; the more light the more heat;" "for a given quantity of light they must have a given quantity of carbonic acid and a given quantity of heat." There appears to be a misapprehension of the generally received theory of the correlation of physical forces in these assertions; a definite quantity of force will no doubt be given out in the formation by combustion of a certain quantity of carbonic acid, but the following table, from Dr. Frankland's lecture at the Royal Institution, in February 1863 (on which my remarks were founded), shows that this force may be given out in largely varying proportions of light and heat. In connection with the subject under discussion, the table may be otherwise interesting to some of your readers who may not have seen it. It shows the amount of carbonic acid and heat generated per hour by various illuminating agents, each giving the light of 20 sperm candles:—

	Carbonic acid.	Heat.	Cost.
	s. d.	s. d.	s. d.
Tallow	10.1 feet	100	2 8
Spermacetti ..	8.3 "	82	6 8
Wax	8.3 "	82	7 2½
Paraffin	6.7 "	66	3 10
Coal gas	5.0 "	47	0 4½
Cannel gas ...	4.0 "	32	0 3
Paraffin oil...	3.0 "	29	0 5
Rock oil.....	3.0 "	29	0 6½

It will thus be seen, at least according to Dr. Frankland's experiments, that for exactly the same amount of light, tallow emits nearly four times as much heat as paraffin oil, and more than twice as much as coal gas.—I am, &c., W. SYMONS.

PARLIAMENTARY REPO RTS.

SESSIONAL PRINTED PAPERS.

- Par. Numb.
32. Bill—Summary Procedure (Scotland), Barracks and Hospitals (Mediterranean Stations)—Report on the sanitary condition and improvement thereof.
- Delivered on 5th and 7th March.*
19. Railway and Canal, &c. Bills (66. Glasgow and North British Railway; 190. Aldborough Pier and Railway; 191. Downs Docks; 192. Forth Bridge Railway; 193. Mid Wales Railway; 194. Neath and Brecon Railway (Extension, &c.), (New Lines, &c.)—Board of Trade Returns.
14. Metropolitan Board of Works—Account.
56. Established Church, &c. (Ireland)—Returns.
83. Charitable Estates and Trusts Acts—Return.
96. Colonel Crawley—Copy of the Proceedings of the Court Martial.
59. Railway, &c. Schemes (Metropolis)—Report of the Engineer of the Metropolitan Board of Works.
97. Colonel Crawley—Copy of an order or Memorandum.
98. Colonel Crawley (Expenses of the Court Martial)—Return.
101. Dr. Turnbull—Copy of Letter.
62. (1). Committee of Selection—Second Report.
24. Bills—Weights and Measures (Metric System).
33. " County Franchise.
42. " Metropolitan Subways.
- New Zealand—Further Papers.
- North America (No. 3)—Correspondence respecting the "Alabama."

To Correspondents.

ERRATUM.—In last number, p. 318, col. 1, line 6, of Dr. Marcet's speech, for "less carbonic acid," read "more carbonic acid."

MEETINGS FOR THE ENSUING WEEK.

- MON. ...** Geographical, 2½. 1. Mr. Arthur J. Scott, "Overland Expedition from Port Denison to Rockingham Bay (Queensland)." 2. Communicated by Sir George Bowen "Proposed New Settlement at Cape York." 3. Rev. Julian Moreton, "Geography of Newfoundland." Medical, 8½. Dr. Salter, "On Tracheal Dysphagia."
- TUES. ...** Medical and Chirurgical, 8½. Civil Engineers, 8. Continued discussion upon Mr. Phipps, Paper, "On the Resistances to Bodies passing through Water;" and, time permitting, Mr. William Lloyd, "Description of the Santiago and Valparaiso Railway." Zoological, 9. Syro-Egyptian, 7. Anniversary Meeting. 8. Mr. Charles E. Harle, "On the Giants of the Bible." Ethnological, 8. 1. Dr. John Campbell, "On the Celtic Languages and Races." 2. Mr. John Crawford, F.R.S., "On the Early Migrations of Man." Royal Inst., 3. Prof. Helmholtz, "Conservation of Energy."
- WED. ...** Society of Arts, 8. Dr. Morgan, "On a New Process of Preserving Meat." Geological, 8. Graphic, 8. Microscopical, 8. Literary Fund, 3. R. Society of Literature, 8½. Archæological Assoc., 8½. College of Preceptors, 7. Professor Buckheim, of King's College, "On the History of Education."
- THUR. ...** Society of Arts, 8. Cantor Lectures. Dr. Crace Calvert, "On Chemistry applied to the Arts—Leather." Royal, 8½. Antiquaries, 8. R. Society Club, 6. Royal Inst., 3. Prof. Helmholtz, "Conservation of Energy."
- FRI.** Royal Inst., 8. Prof. Abel, "On Chemical History of Gun Cotton." Philological, 8. R. United Service Inst., 3. Mr. Archibald Maclaren, "The Chief Features of the Gymnastic School at Chatham, and the Progress made in the Extension of the System of Gymnastic Training in the Army."
- SAT.** Royal Inst., 3. Prof. Frankland, "On the Metallic Elements."

Patents.

From Commissioners of Patents Journal, April 1st.

GRANTS OF PROVISIONAL PROTECTION.

- Aerated bread—677—J. Daughlish.
Apparatus for securing furniture on shipboard—703—P. J. Riboulet and C. Lapelouze.
Brakes applicable to carts, &c.—253—R. B. Thomson.
Bristles, machinery for dragging—631—A. Smith.
Candles, manufacture of—645—W. E. Gedge.
Carding cotton, &c.—614—F. Wilkinson and W. Rossetter.
Carding wool, apparatus for—642—H. Eastwood and B. Matthews.
Cartridges—337—R. J. Cunnaek.
Chimney cowls—707—H. Steele.
Climbing and elevation of weights—428—R. S. Symington.
Corkscrews—480—C. Hull.
Cupola furnaces—665—A. V. Newton.
Dining tables—649—C. R. Broadbridge.
Doors, &c., fastenings for—633—H. Hancock and W. H. Vickers, jun.
Drawing rollers—685—J. Bleasdale.
Dyeing and printing, colouring matters for—3,307—J. Dale.
Electric telegraph cables—637—F. H. Needham.
Endless travelling webs, regulating of—647—C. Anderson.
Fences—662—J. Rowell.
Fire escape—641—J. Newey.
Floor cloth—543—A. Ford.
Furnace bars—640—W. A. Martin and E. Wylam.
Gas and lamp fittings—739—F. Tyerman.
Gaseliers—653—E. Baller.
Gridiron—729—H. Desforages and E. C. Sonnet.
Guns, &c., construction of—625—G. Clark.
Guns, manufacture of—610—J. Shortridge and J. B. Howell.
Hats, caps, &c., application of leather—660—A. Geber.
Heat, apparatus for generating—721—J. Leslie.
Heating and melting iron, &c.—605—J. Clayton.
High-pressure steam boilers—643—E. Rowing.
Hoods, ventilators for—666—R. Holt.
Horse shoes—687—W. Clark.

- Hot blast ovens—609—H. E. Clifton.
Hot water, apparatus for supplying—613—W. Wilson.
Iron, preserving o—695—F. Tolhausen.
Laced boots, construction of—619—W. T. W. Jones.
Lamps—644—S. Holmes.
Lubricating machinery—601—J. H. Schofield.
Mahogany chairs, manufacture of—711—J. Reilly.
Malleable shot, apparatus for manufacture of—481—C. Shaw.
Miners' safety lamps—620—F. Foster.
Motive power—630—W. E. Gedge.
Moulding—646—J. Platt and G. Little.
Mowing grass—650—B. Browne.
Ornamental paper—606—H. A. Bonneville.
Paper hangings—658—A. N. Saleres.
Paper hangings, varnishing of—635—R. Fletcher.
Paper, manufacture of—627—R. H. Collyer.
Pens—676—J. Lavery.
Pile fabrics—673—J. Moore and W. Gadd, jun.
Portmonnaies, &c., locks for—617—C. J. Sharp.
Power looms—667—G. H. Openshaw.
Projectiles—663—H. Caudwell.
Puddling furnaces—31—J. Williams and G. Bedson.
Railway carriages, regulating gas in—615—W. R. Bowditch.
Railway carriages, roof lamps of—737—J. Strafford.
Railway springs, construction of—733—W. E. Winby & W. Wharton.
Railway trucks, apparatus for covering—674—R. Howarth.
Raising and lowering bodies—622—J. Taylor.
Raising water, machinery for—612—F. Walton.
Reaping machines—602—J. Wallace.
Relief plates—method of producing—664—B. Day.
Revolving fire-arms—624—C. E. Wallis.
Rotary engines—655—J. Empson and H. von Hartz.
Rotary steam engines—672—H. Bateman.
Sailing boats, masts for—638—J. Symes.
Scarfs—657—H. Tucker.
Scarfs, fastening of—628—E. Walton.
Ships' sounding rods—656—M. Montgomery.
Signals, marine and land—661—E. F. Ruffin.
Soap, manufacture of—632—J. H. Johnson.
Spinning frames—616—W. Cockshott.
Spinning wool, apparatus in—659—A. H. Martin.
Steam boilers, construction of—671—W. S. Longridge.
Steam ploughs, construction of—683—J. Jarman and S. Sharpe.
Steering ships, &c.—604—T. Banks.
Stoves and furnaces, smoke consuming—621—H. Simester and J. Bainbridge.
Street railways—654—T. P. Tregaskia.
Suet, machine for cutting—717—J. McMorran.
Textile matters—674—R. A. Brooman.
Tunnelling, machinery for—611—H. N. Penrice.
Ventilating hats, apparatus employed in—608—J. V. N. Bazalgette.
Vessels, propelling—616—J. Wild.

INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

731. A. Morel. | 732. A. Morel.

PATENTS SEALED.

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| 2309. R. Couchman. | 2493. P. R. Jackson. |
| 2423. J. Schofield, J. Kirk, and W. Spivey. | 2513. J. Fowler. |
| 2425. E. B. Wilson. | 2515. J. Rowley. |
| 2429. W. H. C. Brakell and W. Gunther. | 2517. E. P. Colquhoun and J. P. Ferris. |
| 2431. J. M. Stanley and J. Stanley. | 2544. W. Clark. |
| 2436. B. G. George. | 2545. L. R. Chesbrough. |
| 2437. T. Ivory. | 2572. G. Davies. |
| 2439. R. Pepper. | 5599. F. Bullock. |
| 2442. E. Whitehouse. | 2601. C. Parker. |
| 2474. J. Wood, J. Whitehead, and T. Tetlow. | 2694. G. F. Busbridge. |
| 2475. J. Elsom. | 3230. A. V. Newton. |
| | 43. J. B. Elwell. |
| | 217. H. Bessemer. |
| | 218. G. Darlington. |

From Commissioners of Patents Journal, April 5th.

PATENTS SEALED.

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| 2438. J. Towilson. | 2501. W. R. Gedge. |
| 2444. R. A. Brooman. | 2503. R. Aitken. |
| 2446. G. Dyer. | 2507. G. Morgan. |
| 2460. G. Whight. | 2509. J. Place. |
| 2467. W. Lorberg. | 2553. H. Gibbee. |
| 2468. J. D. Dougall. | 2711. W. E. Newton. |
| 2489. D. Proudfoot. | 3253. W. E. Newton. |
| 2491. T. Hughes. | |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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| 786. J. Cass. | 820. M. H. Blanchard. |
| 784. J. Rattray. | 833. W. E. Newton. |
| 819. W. Crighton and F. W. Crighton. | 877. F. Ransome. |
| 825. J. G. N. Alleyne. | 933. R. Ransome. |
| 816. J. Sickles. | 829. R. A. Brooman. |
| | 832. A. V. Newton. |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

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| 911. G. Lowry. | 945. R. Birkin, jun., and T. I. Birkin. |
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